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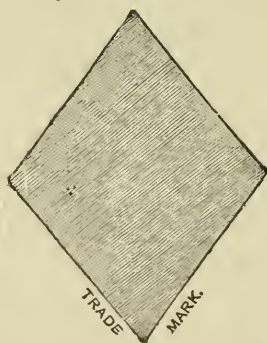
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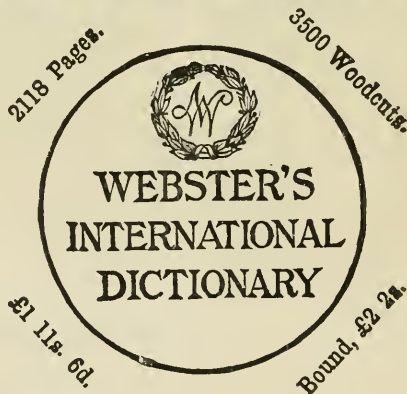
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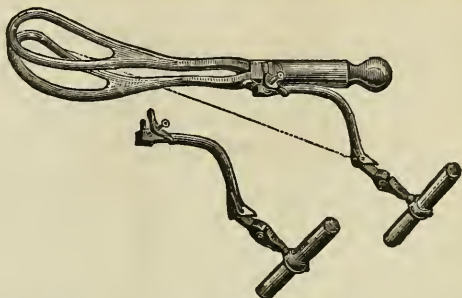
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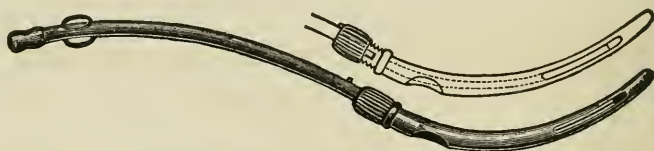


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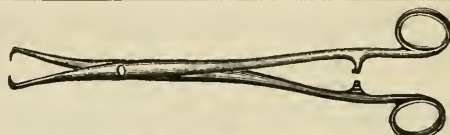


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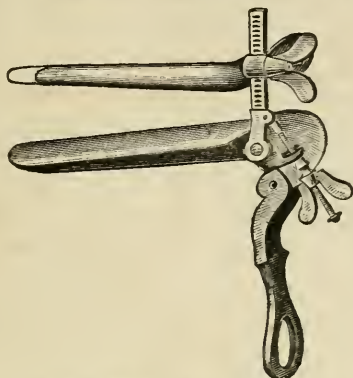
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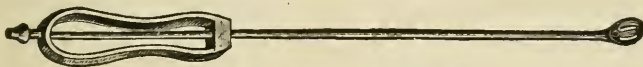


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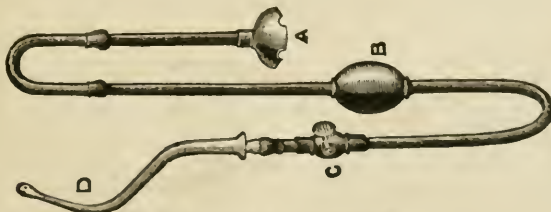
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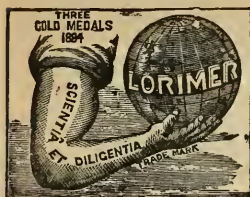
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BOOKS, PAMPHLETS, AND PERIODICALS RECEIVED—JUNE, 1891.

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1. Beiträge zur Augenheilkunde. Herausgegeben von Prof. Dr. R. Deutschmann in Hamburg. II. Heft. Hamburg und Leipzig : Leopold Voss. 1891. 8vo, pp. 120. [Duplicate copies.]
2. A Short Dictionary of Medical Terms. London : J. & A. Churchill. 1891. Pp. 160.
3. Year-book of the Scientific and Learned Societies of Great Britain and Ireland. Eighth Annual Issue. London : Charles Griffin & Co. 1891. 8vo, pp. 219.
4. A Lecture on Contrexéville. By Dr. Debout-D'Estrées. London : J. & A. Churchill. 1891. Pp. 16.
5. The Scientific Aspect of Dr. Koch's Remedy. By William Odell, F.R.C.S. Eng., &c. London : Young J. Pentland. 1891. Pp. 12.
6. Supplement to a Text Book of Pharmacology, Therapeutics, and Materia Medica. By T. Lauder Brunton, M.D., D.Sc., LL.D. (Hon.) Aberd., F.R.S. London : Macmillan & Co. 1891. Pp. 14.
7. How should Girls be Educated? By William Warren Potter, M.D., of Buffalo. New York. 1891. Reprint. Pp. 17.
8. Transactions of the American Association of Obstetricians and Gynecologists. Vol. III. Philadelphia : William J. Dornan. 1891. 8vo, pp. 333.
9. Statement of Mortality in the Principal Cities of Canada for the Month of March, 1891.
10. The National Bulletin. Nos. 25, 26, 27 and 28. May, 1891.
11. Guy's Hospital Reports. Vol. XLVII. London : J. & A. Churchill. 1890. 8vo, pp. 368.
12. The Pharmaceutical Journal of Australasia. New Series. Vol. IV., Part 3. Sydney. March 31, 1891.
13. Le Traitement des suppurations pelviennes et des lésions inflammatoires des annexes par l'hystérectomie vaginale. Par S. Pozzi. Paris. 1891. Reprint. Pp. 12.
14. Atlas of Clinical Medicine. By Byrom Bramwell, M.D. Vol. I. Part 1. Edinburgh : T. & A. Constable. 1891. 4to, pp. 48.
15. The History of the Study of Anatomy in Cambridge. By A. Macalister, M.D., F.R.S., F.S.A. London : C. J. Clay & Sons. 1891. Pp. 28.
16. Bulletin of the Johns Hopkins Hospital. Volume II. No. 12. Baltimore, April, 1891.
17. Twenty-third Annual Report of the New York Orthopædic Dispensary and Hospital. New York. 1891. Pp. 38.
18. Archives of Pediatrics. Vol. VIII. No. 89. May, 1891. Philadelphia : J. B. Lippincott Company.
19. The Alienist and Neurologist. Vol. XII., No. 2. St. Louis. April, 1891.
20. On the Physiology of Asphyxia, and on the Anæsthetic Action of Pure Nitrogen. By George Johnson, M.D., F.R.S. London. 1891. Reprint. Pp. 20.
21. On the Physiology of Asphyxia, and on the Anæsthetic Action of Pure Nitrogen. By George Johnson, M.D., F.R.S. From the Proceedings of the Royal Society. Vol. 49. 1891.
22. The Hygienic Excellence of Irish Linen. By J. S. Milton, Senior Surgeon to St. John's Hospital for Diseases of the Skin. Belfast. 1891. And other papers reprinted from the Irish Textile Journal.
23. The Physical Signs of Cardiac Disease. By Graham Steell, M.D. Edin. Second Edition. Manchester : J. E. Cornish. 1891.

*Books, Pamphlets, and Periodicals received—continued.*

24. Notes on Surgery for Nurses. By Joseph Bell, M.D., F.R.C.S. Edin. Third Edition. Edinburgh: Oliver and Boyd. 1891. 8vo, pp. 156.

25. Materia Medica and Therapeutics. By John N. Shoemaker, A.M., M.D. Vol. II. Philadelphia and London: F. A. Davis. 1891. 8vo, pp. 654.

26. Studies on the Etiology of Diphtheria. Second Series. By T. Mitchell Prudden, M.D. New York: Trow. 1891. Reprint. Pp. 19.

27. Blätter für klinische Hydrotherapie. I. Jahrgang. No. 1. Wien. Mai, 1891. Pp. 16.

28. The Dietetic Gazette. Vol. VII. No. 5. May, 1891. New York.

29. Quain's Elements of Anatomy. Vol. I., Part II. General Anatomy or Histology. By Professor Schäfer. Tenth Edition. London: Longmans, Green, & Co. 1891. 8vo.

30. An Introduction to the Diseases of Infancy. By J. W. Ballantyne, M.D., F.R.C.P.E. Edinburgh: Oliver and Boyd. 1891. 8vo, pp. 242.

31. The Journal of the British Dental Association. Vol. XII. No. 5. May 1891. London: Baillière, Tindall & Cox.

32. On "The Use of Greek." By Maurice C. Hime, M.A., LL.D., Head Master of Foyle College, Londonderry. Dublin: Hodges, Figgis & Co. 1891 Pp. 32.

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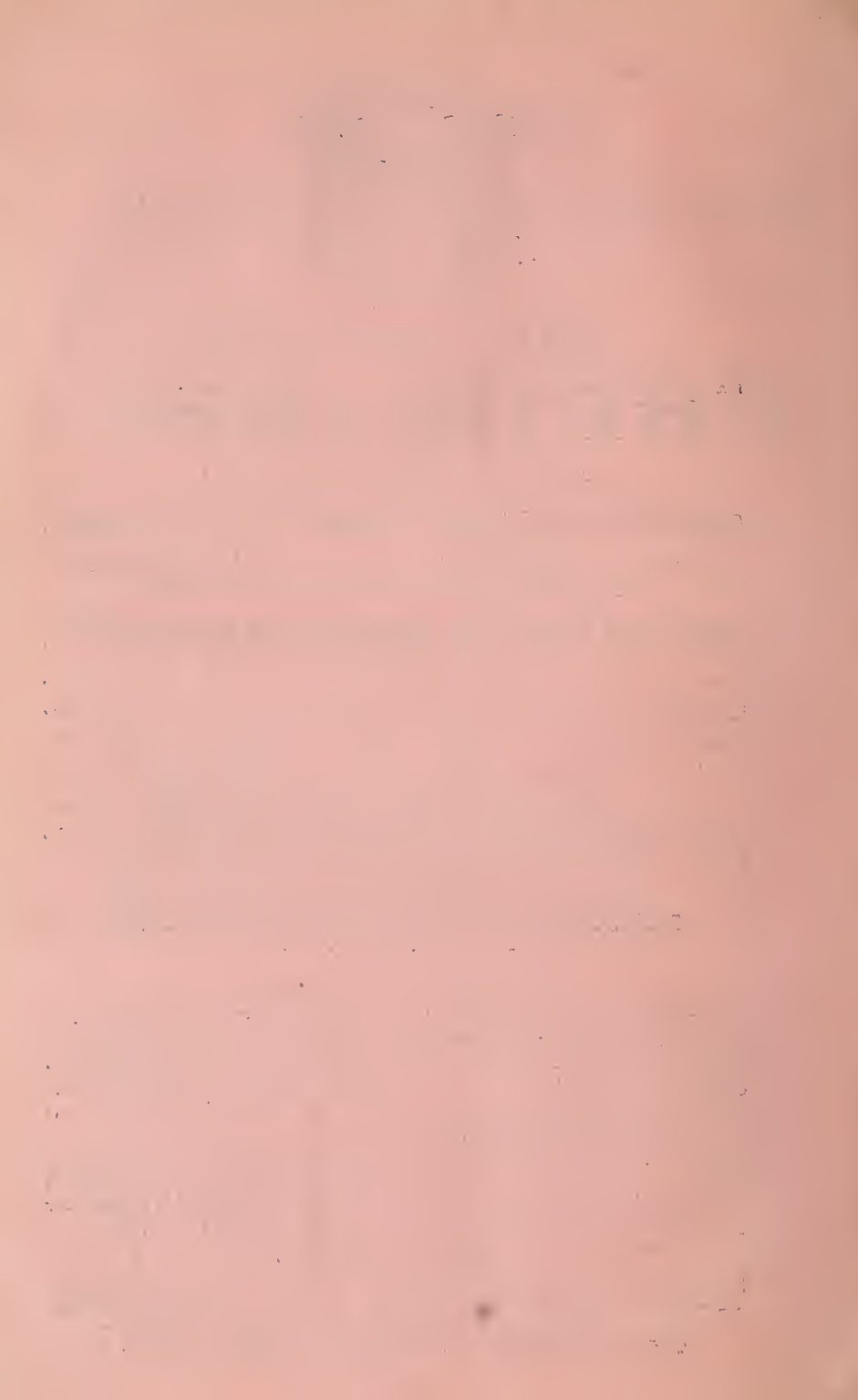
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EDITED BY  
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OF

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JUNE 1, 1891.

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### PART I.

### ORIGINAL COMMUNICATIONS.

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ART. XX.—*Puerperal Fever: its Nature, Prevention, and Treatment.* By JOHN W. BYERS, M.A., M.D.; Physician for Diseases of Women to the Royal Hospital, Belfast; Physician to the Belfast Hospital for Sick Children; Examiner in Midwifery, and in Diseases of Women and Children, to the Royal University of Ireland; Fellow of the Obstetrical Society of London, and Fellow of the British Gynæcological Society.

(Continued from page 420.)

2. *Prevention of Puerperal Fever.*—Those of you who have followed the recent discussions on abdominal surgery will have observed that one class of operators aim at preventing the ingress of the micro-organisms, while the other use all their precautions—by thoroughly cleansing the peritoneum and by drainage—to prevent any organic material being left behind on which the bacteria can grow and develop. Antiseptic midwifery aims at carrying out both these ideas, and even more—it has as its objects three things:—

1. To prevent the introduction of germs into the body, this being carried out by antiseptic cleanliness of the hands, instruments, &c.

2. To kill them in the body before they have got into the blood and tissues. This is done, especially in lying-in hospitals, by antiseptic douches; but in certain conditions they may also be needed in private practice.

3. To prevent any piece of placenta, blood-clot, &c., being left behind on which the germs, if by chance they gain admission, may act. This is carried out by a proper management of the third stage of labour, by taking the utmost precaution that nothing is left behind (placental remains, membrane, &c.), and by allowing patients to sit up for a short time, as soon as it is practicable, so as to facilitate drainage of the uterus and vagina.

In speaking of the prevention of puerperal fever, let me say a word or two on the following points:—

(a). *The Nurse*.—If all monthly nurses were thoroughly taught to believe in the contagiousness of puerperal fever, and if rigid antiseptic precautions were used in all those institutions in which they received their training, we feel sure they would soon come to see the immense importance of extreme cleanliness, and look upon the routine of the antiseptic methods not as a drudgery, but as an absolute necessity. A nurse who has an enthusiastic belief in strict antiseptic measures, is worth a dozen who simply carry out the precautions in a mechanical way. I have drawn up the following rules for the guidance of nurses:—

#### *Rules for Monthly Nurses.*

1. The nurse at the commencement of a confinement must prepare two vessels, each containing a pint of 1 in 1,000 corrosive solution. She will renew these at the termination of the labour, and every morning for the first week.

2. The one basin is for rendering aseptic any syringe, rectal or vaginal pipe, bed-pan, &c., which may be required for the patient's use. The other basin is for rinsing the hands on *every* occasion previous to touching the genital organs of the patient, and for washing the genitals.

3. She must not touch, or make any application whatever to a patient, without first thoroughly washing her hands in soap and water (using the nail-brush), then washing them in plain water, and finally rinsing them in the corrosive solution.

4. Before making any vaginal examination she must, after attending to the directions in 3, smear the finger with corrosive vaseline.

5. No sponges are to be used for cleansing the genitals, but, on the contrary, Hartmann's wood-wool tissue, salicylic wool, or ordinary cotton wool. A fresh piece, previously wrung out of the corrosive solution, is to be used each time, and then thrown away;

on no account must it be dipped a second time into the solution after having been used.

7. All vaginal pipes (glass), catheters, &c., should be rinsed in the corrosive lotion and then smeared with corrosive vaseline before being used, and always before the catheter or vaginal or enema pipe is used the external genitals are to be cleansed with the corrosive lotion.

8. All diapers or other articles, when used, shall be removed out of the room as soon as possible.

9. The perchloride or corrosive lotion is to be made by adding one of the following powders (Cullingworth's powder) to a pint of water (℞. Hydrarg. perchl., gr. 10; acid tartaric, gr. 50; pulv. cocci, gr. 1), or by adding one teaspoonful of the following solution to a pint of water:—

℞. Hydrarg. perchl., gr. 154.

Glycerin., ʒ ij.

Acidi Hydrochlorici diluti, m. 77.

The sublimated vaseline is of the strength of 2 grs. to the ounce.

The greatest attention should be paid to the preparation of the hands. The soap and water and nail-brush remove the dirt and grease. The rinsing in plain water is to get rid of the soap, the presence of which would render the action of the corrosive inert, while the final wash in the corrosive solution is to make the hands antiseptic.

(β). *The Accoucheur*.—In his management of a case, the medical attendant should adhere to all those precautions laid down for the guidance of the nurse. He should make as few examinations as possible, and he should be most careful in his management of the third stage—that is, to follow down the uterus during the birth of the child's body, and to express the placenta, and then to keep up firm pressure for some time before putting on the binder. Further, it is a most useful precaution, as against the introduction of air, to make the patient lie on her back as soon as the child is born; a firm application of the binder acts in the same way. If there is any laceration of the perinæum it should be stitched. The plan I like best is to place some lint soaked in the antiseptic solution in the vagina, then carefully to use a hot sublimate douche to the parts, and stitch the torn edges by means of a curved perinæum needle and silkworm gut. In this operation the best position for the patient is the dorsal one. Hartmann's sublimate wood-wool diapers are, I think, better than ordinary napkins wrung out of antiseptic

solution. When the perinæum is being dilated, its stretching may be facilitated by employing wood-wool tissue wrung out of hot corrosive lotion, and by lubricating it with the antiseptic vaseline. Should any of the membranes be retained, they should certainly, at the time of the labour, be removed. If the patient has had a natural labour she should be encouraged, after the second day, to sit up for a few minutes occasionally, so as to facilitate the escape of the discharges, and at times to pass water in the knee-elbow position.

(γ). *Question of Douches.*—In lying-in hospitals the routine use of the corrosive douche has given the best results, but in private practice its employment is not called for as a routine except under certain circumstances, and then it must be used only by a competent person. A douche of 1 in 4,000 corrosive should be given before the child's birth, under the following circumstances:—

1. If a nurse has examined the patient without using the precautions which have been given.

2. If there is a purulent or muco-purulent discharge from the vagina. This is done alike in the interest of the mother to prevent sepsis, and of the child to ward off the onset of ophthalmia neonatorum. After a difficult labour—a prolonged labour—after instrumental delivery, and in every case in which the hand is introduced into the uterus for turning or removing the placenta, a 1 in 4,000 hot corrosive douche should be given, and also to syringe out the vagina immediately after an ordinary confinement. The experience of bacteriologists, as well as that gained in lying-in hospitals, have clearly demonstrated that corrosive sublimate is the best antiseptic we have. As, however, it has been shown that there is risk attending its use, I do not think it should be employed as a routine after delivery in private practice—it should be used only by the medical attendant, or by a competent nurse at his suggestion. In using it care should be taken—by pressure with one hand above the uterus, and by holding the perinæum back with the other, to prevent ballooning of the vagina—to avoid leaving any of the fluid behind. It should always be used hot, so as to cause contraction of the uterus; and under the following conditions it should not be employed—

(a.) In those with renal disease.

(b.) In the anæmic, say after hæmorrhage, in whom absorption is very apt to occur more readily. If, while using the sublimate douches, there is the least diarrhœa or soreness of the gums, the douches should at once be abandoned, and bismuth prescribed, as



well as saline aperients, and plenty of fluids. In Dr. Boxall's interesting paper, "Fever in Childbed," the enormous advantage of corrosive sublimate as an antiseptic at the General Lying-in Hospital is proven, and it is shown that while during a short period, eight weeks, salufer washing and douching (silico-fluoride of soda, 1 in 500 = gr. 20, ad Oj.) of the patients were employed in place of the sublimate, two deaths occurred from septic poisoning, and further, during this same period three additional cases of septic fever occurred, whereas immediately before salufer was introduced, and after it was abolished, no such case occurred when the sublimate was the antiseptic used. For washing hands, cleansing the patient, instruments, and articles employed by the nurse, corrosive solution, 1 in 1,000, is absolutely safe and by far the best antiseptic, and in the majority of cases of natural labour in private practice the regular use of douches of any kind is not necessary, but the corrosive lotion should be regularly used to bathe the external genitals. If douches are needed afterwards, then the corrosive ones are the best.

Antiseptic precautions are to be specially rigidly employed in the case of primiparæ, as they are prone to sepsis for three reasons—

1. Tearing and bruising of the parts are liable to occur ;
2. From the delay in the labour, examinations are more frequent ; and—
3. Instrumental interference is more often necessary.

In what I have said in reference to the conduct of the accoucheur and of the nurse, I have urged the extreme importance of not making too frequent vaginal examinations. The great thing is to make the first examination as thorough as possible, and to avoid any further, unless absolutely necessary. I would urge upon my professional brethren the great value of abdominal palpation during labour. Its importance and assistance during pregnancy we all know from experience, but its special value and help during labour lie in this, that the more it is used the less will it be necessary to make internal examinations. Women who enter a lying-in hospital, after delivery rarely suffer from puerperal fever, because, through not being examined, they have avoided the risk of having the germs of the disease conveyed to them ; while, on the other hand, one of the reasons why women with slow and tedious labours and primiparæ often develop puerperal fever is the frequency of vaginal examinations. Leopold (*Archiv. für Gyn.*, Band. XXXV.) states that at the Dresden Lying-in Hospital, during the years 1886, 1887,

and 1888, 248 women were delivered without any medical aid. They were neither examined, nor touched, nor syringed. Of these 98 per cent. had no fever during the puerperium. Five only of the patients had febrile symptoms, and they were slight.

Objections have been brought against these antiseptic precautions on many grounds. Some say such arrangements can be carried out only in better-class practice, but that it is impossible to do so in the case of the poor who have no nurse; but, on the other hand, antiseptic measures can be so simplified as to cost very little, and any person with even a small share of intelligence can carry out the details as the doctor directs. Two things can easily be done—1st, the medical man can render his hands and instruments antiseptic, as a few corrosive powders, or a bottle of the concentrated glycerine corrosive solution and a nail-brush, can easily be carried in his bag; and further, he can train any friend or neighbour to bathe the genitals of the lying-in woman with the antiseptic solution twice or thrice daily; no douching is needed. Again, it is said by some that they do not meet with cases of puerperal fever in their practice, and that midwifery fees are so low they would not pay the time or trouble expended in carrying out the antiseptic system. To this I would reply that statistics show that, without antiseptic precautions, the disease is sure to occur sooner or later, and even if patients have not died of the malady with some fortunate doctors, have they been free from chronic pelvic diseases following their confinements? Even should one septic case occur in any man's practice, it surely entails more attendance and anxiety from the risk of its being carried to other lying-in women, that the trouble of the antiseptic precautions is in comparison a mere trifle.

The use of antiseptic precautions is as necessary in country as in town practice. From the fact that a hard-worked and busy medical man in the country has to be surgeon, physician, and accoucheur, he is obliged—often in the same day—to open foul abscesses, dress offensive wounds, see cases of erysipelas, and attend a confinement. If he employs antiseptic methods, he has the feeling that he has taken every precaution he can for his lying-in patients, and his chances of seeing cases of puerperal fever will be very much minimised. In this connection I may state that “The Abstract (of the Decennial Summary of Births and Deaths for the years 1871–80) shows that in every union in Ireland deaths from puerperal fever were recorded.”

After using instruments at a confinement, I think they are best

disinfected by washing them with soap and water—using a nail-brush—and then leaving them some time in a vessel in which they are covered with boiling water. They can then be carefully dried.

3. *Treatment of Puerperal Fever.*—From the view I have taken as to the nature of puerperal fever, it follows that I regard local treatment as of the utmost value in the management of this disease; but I cannot insist too much on the great importance of its being done early. I am afraid too many of us in the past have waited, when our patients became feverish after childbirth, in the hope that we had merely an attack of so-called “milk-fever,” or that the constitutional disturbance present was due to a “chill,” the result of cold, until the persistence of the illness and the failure of diaphoretics and quinine showed clearly that the complaint was puerperal fever, and so unfortunately the time for which there might have been hope for local treatment has been allowed to pass. In any case, therefore, in which fever sets in after confinement—in which there is no obvious local cause to explain its occurrence—I am a strong advocate of disinfecting the genital tract. This can best be done by using a 1 in 4,000 corrosive douche. A few precautions may be useful as to the employment of the douche:—

1. The patient is best kept on her back.

2. The douche should be given hot, so as to stimulate the uterus to contraction, and the antiseptic solution and the water should be well mixed before being added to the douche reservoir.

3. The intra-uterine tube should either be in the form of a double-channelled catheter (Bozeman's), or a grooved glass tube, so as to provide for a return current, and to prevent the possibility of distension of the uterus.

4. Before using the douche the external genitals are to be washed with wood-wool, squeezed out of the 1 in 1,000 corrosive solution, the vulva is then to be syringed, then the vagina, and while the fluid is still running the tube is to be passed into the uterus. The uterus should be grasped firmly by one hand, and at the end of the operation, when the tube is withdrawn, it should be squeezed firmly from the abdomen, and pressed downwards, so as to drive the fluid not only out of the interior of the uterus, but out of the vagina. Further, to prevent any accumulation of fluid through “ballooning” of the vagina, and possible hydrargyrisms, the perinæum should be drawn backwards by the tube, so as to let

the fluid all drain away. By asking the patient to cough she will assist in the expulsion of any fluid.

5. The reservoir for the douche must not be more than a few feet above the level of the patient. Some have said that the uterus should be washed out after delivery only under the following conditions:—pyrexia, with foetid discharge; retained placenta or membranes after birth of a putrid foetus; but I would advise it in any case of fever setting in after labour. In cases in which sublimate douching is regularly employed it is well, as Boxall has pointed out, to encourage its elimination (in case of absorption) by the kidneys, by giving a copious supply of liquids (lemonade), and still more through the intestines, by giving saline aperients, as a drachm of sulphate of magnesium thrice daily. While foetor of the lochia is a strong indication for the douche, yet, on the other hand, we may have a patient becoming poisoned in sapræmia, or dying from septicæmia, and yet no foul odour may be detected on vaginal examination. I have seen cases frequently which set in with a rigor and high temperature on the third day yield to this form of treatment. Among these I find from my note-books there were cases of dead foetus, retained membranes, pieces of placenta, &c.; but in several there was nothing brought away, and there was no bad odour from the vagina; the indication for the douche was the sudden onset of fever. They were probably cases of sapræmia in which the douche did its good by destroying the micro-organisms, as well as the poison evolved in their growth. Sometimes, in case the temperature rises, the douche has to be repeated, say twice in the twenty-four hours. When there is a foetid discharge, and the douche has washed away a piece of placenta, or a portion of membrane, or in cases in which such matters have been removed by manual extraction, after employing the douche, I have found the use of Ehrendorfer's iodoform bougies of considerable service. These are made about the size and shape of the little finger; each contains 100 grs. of iodoform made up with glycerine, gum acacia, and starch. After washing out the uterus, they are introduced by means of a pair of forceps up to the fundus. In their gradual melting they will, it is said, keep the genital tract aseptic for three or four days. I have used these iodoform bougies in several cases with advantage. There is still another form of local treatment which I employed with signal advantage in a very bad case of septicæmia last May. The lady, on the third day after her first confinement, had a severe chill, followed by high fever and grave constitutional disturbance.



Sublimate intra-uterine douches caused a slight fall in the temperature, but neither they nor the internal administration of quinine, antipyrin, salicylate of sodium, or Warburg's tincture seemed to have much effect on the general course of the disease, until I used the curette. After scraping the interior of the uterus, and using the douche, a quantity of debris, apparently diseased endometrium, came away, and a decided change in the patient's condition set in, which eventually culminated in recovery. Since then I noticed that von Braun-Fernwald (*Arch. für Gyn.*, Band XXXVII.) has written a paper, in which he states that out of 7,600 women delivered in the Vienna clinic the uterus was scraped in 101 cases, and of these, while 5 died, 96 recovered. He gives the following as the indications for curetting of the puerperal uterus:—1. Early onset of fever. 2. Deficient involution of the uterus. 3. Lochia of unnatural colour, offensive, and often containing fragments of decomposing tissue. In my case I simply curetted and washed out the uterus afterwards, but Braun-Fernwald advises that, after the curetting and washing out, the uterus should be compressed between the hands to cause contraction. A piece of iodoform gauze, soaked in tincture of iodine, is passed into the uterine cavity. If there are any fissures in the vagina, they are painted with tincture of iodine, and the vagina is packed with iodoform gauze. The patient is put back to bed and given brandy, and locally over the uterus an ice bag is applied. At the end of twenty-four hours he removes the gauze plugs, and afterwards the vagina is washed out once in twenty-four hours with an antiseptic solution. Chantemesse (*Progrès Médical*, Mars 29 and Mai 10, 1890) advised, in the treatment of puerperal fever, if the washing out of the uterus with corrosive fails to relieve, that the uterine wall should be curetted, swabbed with a 10 per cent. chloride of zinc solution, and plugged with a strip of iodoform gauze. Any swelling or tenderness on either side of the uterus, or any fixation of that organ, contra-indicates local treatment applied to its interior. If there are any foul or diphtheritic-looking sores in the genital canal, these are treated by the local application of iodoform in powder or in ointment. The previous removal of any sloughing tissue, or the touching of the sore with a strong caustic, is often of use. Local treatment, such as I have recommended, will not, unfortunately, succeed in all cases. The poison of septicæmia is often too virulent and too active in its effects, but I am confident of one thing, that in the treatment of puerperal fever local measures have been far



too much neglected. It has been well said by Spiegelberg—"If we could thoroughly expose those organs (the genital), and thus render them freely accessible, we should doubtless, in the majority of cases, be able to prevent the further extension of the infection by energetic local measures."

When local measures fail, or when they have not been tried, our aim is to sustain the patient in her fight with the disease, and to attack symptoms as they arise. In such circumstances all of us know the bad prognosis in many cases. We give as much concentrated nourishment in the liquid form as the patient can take—beef-tea, meat-jellies, eggs, milk, &c.—alcohol if the pulse is weak, and opium if there is pain, with the local application of poultices, and anodyne fomentations for localised tenderness. We may attack the fever with cold applications, cold or tepid baths, and the internal administration of quinine. I have not seen much benefit from antipyrin, salicylate of sodium, tincture of aconite, sulpho-carbolate of sodium, turpentine, or Warburg's tincture. In my own experience the best line of general treatment in such cases is to endeavour, by plenty of nourishment and stimulants, to keep up the patient's strength, to give quinine, and to use cold applications for the fever, to allay pain with opium, and to open freely and drain any local accumulations of matter. I have no experience of opening the abdomen for general puerperal peritonitis. It has been done by making a small incision, introducing a gum-elastic catheter, or nozzle of a douche, so as to wash out thoroughly the peritoneal cavity with warm water; but so far the results have not been very brilliant.

In connection with obstetric practice, the question is being frequently debated in the medical journals, "How soon after being exposed to an infectious disease may a practitioner take charge of a confinement?" Dr. French, Minneapolis, sent a memorandum asking, "How soon after exposure to sepsis may the accoucheur safely resume practice?" to a number of the leading members of the profession in America and Europe. Some replied (Thornton, Savage, Hegar) that time was a necessary factor, accompanied, of course, by thorough cleansing; while others (Emmet, Thomas, Marey, Battey, Goodell, in America, and Martin, Schroeder, Volkmann, Nussbaum, and Esmarch, on the Continent) replied that time was non-essential, and that thorough disinfection can be at once accomplished. Esmarch, in his letter to Dr. French, writes as follows:—"If you have thoroughly disinfected yourself,

you can immediately enter upon obstetric practice. Time does not destroy septic dirt." Before the use of antiseptics in midwifery, if a practitioner came across a case of erysipelas, scarlet fever, abscess, &c., he was advised to give up his obstetric practice for a time—a very comforting piece of advice to a struggling medical man, and all the more galling when he observed, if it were a consulting physician who tendered this opinion to him, that the latter did not hesitate to see cases of scarlatina, measles, or pneumonia, in the same day; while if it were a surgeon who recommended the same course, he did not give up his practice for a time, or hand over his operations to another, if he chanced to have a case of erysipelas or pyæmia. Further, in many country districts it is impossible for the general practitioner to take such a course. My own opinion is that a thoroughly conscientious man may, after having attended an infectious or septic case, if he change all his clothes, if he take a warm or Turkish bath, and if he use most rigidly the antiseptic methods, soon resume obstetric work. Those who employ the antiseptic precautions will feel they have used every means to prevent the carrying of the contagion to their patients.

It has been said that the best way to prevent *post-partum* hæmorrhage is to act in every case as if its occurrence was imminent; as a result, those who now manage the third stage of labour in accordance with modern obstetric teaching have few cases of this complication. May I suggest, in conclusion, if in our midwifery practice we regard puerperal septicæmia as likely to develop, in every case we ought to take all precautions—first, to prevent the poison reaching the patient; and, secondly, to destroy the poison if it comes in contact with the patient before it enters her blood and tissues. This is the aim of antiseptic midwifery.

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#### ART. XXI.—*Histology of Tubercular Tissues treated by Koch's Tuberculin.*<sup>a</sup> By EDMOND J. M'WEENEY, M.A., M.D.

I HAVE again to apologise to the Academy for a paper the title of which does not accurately represent its nature. My original intention was to lay before the Pathological Section some specimens of tubercular tissue from a case of tubercular dactylitis which had been treated for some time with tuberculin. Subsequently a patient died who had received some injections of the fluid at a late stage of chronic pulmonary phthisis, and it occurred to me that it would be well to place the histology of these two cases before the Academy of Medicine, together with a short *résumé* of the work done on the Continent with reference to the minute changes in the tissues of lymph-treated patients in general—a *résumé* which I trust will prove not uninteresting. It must be understood that I confine myself exclusively to the micro-anatomical changes and make no reference to the clinical symptoms.

<sup>a</sup> Read before the Section of Pathology in the Royal Academy of Medicine in Ireland, on Friday, April 3, 1891.



O. Israel (*Berlin. klin. Wochenschr.*, 1890, p. 1127), found in a patient who suffered from a peri-articular abscess, and who had received thirteen injections, that the wall of the abscess consisted of a layer of granulation tissue and of a layer of necrotic tissue. The former was composed of spindle cells, thin-walled vessels, and a few cells with nuclei undergoing division. In the neighbourhood were *mast-zellen* and giant-cells. There was a partial infiltration with multinuclear leucocytes. Bacilli were found scattered through the necrotic tissue, not at all in the living or giant cells. The interesting point about this case is that all reaction had completely ceased to follow the injections after they had been employed for five weeks, and yet the microscope as well as the inoculation test had revealed the presence of numerous bacilli.

Henoch and Rippert (in *Berliner and Deutsche med. Wochenschr.*, 1890), give cases of tubercular meningitis in which no microscopic changes in the tubercles could be detected; no cellular infiltration or other inflammatory change.

In the *Berliner klin. Wochenschrift* for 1890, p. 1174, Litten describes a lymph-treated case of tubercular ulceration of the gums. Great hyperæmia in the neighbourhood, followed by break-down of the affected tissue, was demonstrated, and, what is very remarkable, a fresh crop of miliary tubercles was detected in the immediate vicinity. Litten thinks they were dislodged from their original situations and scattered about.

Ewald is of the same opinion, for (in the *Berl. kl. Wochenschrift* for 1890, p. 1175), he says that the "Koch fluid stirs up the tubercular deposits just as the dog stirs up the badger in its lair."

Kromeyer (in the *Deutsche med. Wochenschrift* for 1890, p. 1138, and 1891, p. 305) publishes careful histological researches on the effect which the Koch treatment exercises upon lupous tissue. He excised a portion seven and a half hours after the injection, while the reaction was at its highest, and found an infiltration with polynuclear leucocytes around each tubercle, especially in the neighbourhood of the vessels, from which an abundance of fibrinous fluid had escaped, together with wandering cells. Many of the latter had found their way into the interior of the tubercle and even into the giant cells. The tubercles contained more round-cell elements than normal, but no partial necrosis affecting these structures was to be detected.

Riehl (in *Wiener klin. Woch.*, 1890, p. 51), examined a piece of lupous tissue after the second and the third injection, and found

abundant emigration of leucocytes into the tubercles and deposit of fibrin both in the tubercles themselves and in the vicinity.

Jacobi arrived at the same result after an examination of four pieces of lupous skin cut from the same patient at regular intervals, representing each stage of the process of reaction.

Jürgens (in the *Deutsche med. Wochenschr.*, 1890, p. 1,164), gives details of a curious case of phthisis with tubercular ulcers in the larynx and likewise in the stomach and intestines. None of the tubercles which appeared abundantly on the floor and sides of these ulcers contained any giant cells; and Jürgens thinks that these which occurred in the stomach were the result of a necrosis and purulent infiltration of small tubercular nodules which had originally lain deep in the substance of the mucous membrane. He also thinks that a general leucocytosis is caused by the lymph, and that the ultimate effect of this on tubercles and healthy body structures yet remains to be appreciated.

Rumpf (*Deutsche med. Wochenschr.*, for 1891, p. 106) gives two cases of pulmonary consumption, in one of which there was quite fresh pneumonic infiltration, in the other an outbreak of fresh tubercles in the pia mater.

Virchow's well-known paper (*D. m. W.*, 1891, p. 131) deals with the naked eye changes, but Hansemann, his assistant (in the *Therapeutische Monatshefte.*, Januar, 1891) divides the micro changes into three stages, of which the primary is characterised by hyperæmia, the secondary by local leucocytosis, the tertiary by necrosis, caseation of the old, and, unfortunately, sometimes by the outbreak of fresh, miliary tubercles.

To sum up the pathological histology of Koch-treated tissues we have—infiltration with leucocytes, fibrinous exudation not infrequently; sometimes the hyperæmia and infiltrated tissue appears to undergo necrosis, more often no signs of necrosis are met with; not infrequently fresh tubercles are found to have been formed, with either a local or a general distribution. The fresher the tubercle, the more miliary, so to speak, the less sign it shows of being affected by the injections.

Turning now to the cases I have myself had occasion to observe, the first is that of a girl:—

CASE I.—M. K., aged twenty, who was admitted into the Mater Misericordiæ Hospital in last November, under the care of Mr. Hayes, suffering from a sore on the middle finger of the right hand. The finger was spindle-shaped, thickest part corresponding to the proximal inter-

phalangeal articulation, upon the ventral aspect of which there was a circular aperture in the skin, from which a fungus mass protruded about the size of a hazel nut. She gave no history of injury, but stated the finger had become sore, and finally, on being poulticed, "broke," upon which the mass of tissue just described made its appearance. She could not actively flex the finger at any joint. She received ten injections ranging from one to twelve milligrams of the lymph, after the first of which she reacted both locally and generally (to 101°). The local reaction consisted of reddening and swelling of the fungous mass, with serous exudation. Afterwards it appeared to become somewhat smaller, but ultimately the reactions became so slight and irregular, and the progress of the case so unsatisfactory, that recourse was had to the knife, and in December last the Senior House Surgeon, Mr. Staunton, removed the fungus mass, which adhered closely and appeared almost to infiltrate the flexor tendons.

I fixed some of it with Flemming's chromo-aceto-osmic mixture and placed the rest in absolute alcohol. After the fixation process was completed I transferred the piece from the Flemming to alcohol, and subsequently embedded in celloidin. I demonstrate two of the sections, one stained with Delafield's hæmatoxylin, and the other with the picro-lithiocarmine of Orth. They both show the tissue to be composed of numerous lymphoid cells lying in the meshes of a fibrous stroma. Here and there are tubercles containing typical centrally placed giant cells surrounded by epithelioid cells. These tubercles are extremely numerous, and close together, and exhibit no signs whatever of any retrogressive change. The only unusual feature they present is the extreme density and distinctness of the fibroid envelope in which each is enclosed. The high power shows this well.

After the operation the patient made a rapid recovery, and was discharged from the hospital with her finger completely healed and restored almost exactly to its normal shape, but quite incapable of flexion.

CASE II.—M. C., aged twenty-two, was admitted in November last to the Mater Misericordiæ Hospital, suffering from advanced phthisis. She received at lengthy intervals a few injections, which produced no very marked reaction, and as her condition was very weak, the treatment was discontinued, and she lingered on till Feb. 27th, 1891, when she died. I performed an autopsy as usual, and extract the following from the notes made at the time:—

*Left lung*, fixed to the thoracic parietes by numerous and tough adhesions, the inferior margin of the lower lobe only being free. Size, normal; consistency greatly increased; the lung felt hard and heavy, its shape was rounded owing to large collapsed cavity at apex. On section this cavity was found to be as large as a duck's egg. Numerous smaller

ones communicated with it. Contents, muco-purulent. Elsewhere the cut surface consisted chiefly of the orifices of enormously dilated thick-walled bronchi, with intervening slate-coloured fibroid patches and caseating areas. Around the base was a small portion of air containing lung tissue, the upper margin of which was studded with small circular patches of tubercular peri-bronchitis, gradually becoming closer together till the completely consolidated portion of lung was arrived at.

*Right lung.*—Similar to left in appearance and with regard to the pleurisy. But a much larger portion was free from tubercle, not more than half the lowest lobe being affected.

The *kidneys* were in a state of fatty degeneration, and in the left was a small infarct. The intestines presented numerous small tubercular ulcers. Vermiform appendix very long and large, with a sort of cyst the size of a pea at its apex, and studded within with tubercular ulcers. The large intestine also contained numerous and large ulcers. On the peritoneal aspect the tubercles could be distinctly traced. The mesenteric glands were enlarged to the size of peas, and were partly caseated.

I have placed under the microscope two sections of the lung. One under a low power shows the peri-bronchitis and bronchitis, which, though tubercular in origin, here shows no well-formed tubercles, but only diffuse small cell infiltration with numerous giant cells.

The epithelium of the bronchi has mostly degenerated, and there is diffuse small cell infiltration of the submucous tissue, distinct hyperæmia evidenced by the dilated vessels (the corpuscular contents are stained bright red with eosin), the fibroid portion is hypertrophied, and the mucous glands are in a state of diffuse small cell infiltration. The neighbouring alveoli are completely choked up with catarrhal material and for the most part metamorphosed into a dense pigmented fibroid tissue.

The other section cut from the same block, but magnified 1,000 diameters, shows the bacilli diffused in greater or less abundance through the mucous and submucous coat of the bronchi, and particularly in the most superficial caseous layer which has replaced the degenerated epithelium. They do not seem to be within the cells or in the depths of the fibrotic lung tissue.

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ART. XXII.—*Syphilitic Arteritis.* By DR. PAUL LE ROUX.

Translated by CHARLES GREENE CUMSTON, Student Associate of the Royal Academy of Medicine in Ireland; Assistant at the Butini Hospital, Geneva, Switzerland.

ARTERITIS is one of the tertiary manifestations of a syphilitic diathesis, producing the same lesions in the brain as in other organs—such as the spleen, liver, kidneys, lungs, or testicles. No matter in what part of the human frame it may be observed, it is



characterised by a cellular hyperplasia, liable to terminate later on in either sclerosis or gumma. Cerebral arteritis at first sight appears to be rare, but if one takes into consideration the cases of syphilis which are met with in hospital practice, it shows itself quite frequently, but the fact that the diagnosis is difficult accounts for the small number of cases on record; often it is only by a *post-mortem* examination that its existence is revealed. Syphilitic arteritis is curable in the first stage, when the lesion is forming, and the already diseased arteries are not completely invaded by the newly-formed tissue. For this reason it is most important to recognise the affection in the early stage, and upon this we have tried to throw light in this article.

In spite of the variety of the manifestations of cerebral syphilis, which is a protean affection, I will divide the symptoms into two classes—1st, symptoms which appear from the commencement, when the artery attacked is simply narrowed in calibre and the blood has some difficulty in flowing through the vessel; 2nd, the other symptoms appearing a little later on, when the artery is completely obliterated, and the blood is thus cut off from the vessel, and cannot carry life to that part of the brain for which it was intended. One of the first symptoms which attract the patient's attention is a persistent cephalalgia—becoming more intense in the evening—occupying the frontal region, rarely the occipital, and never the temporal. This cephalalgia renders all movements painful—walking is difficult, and soon becomes impossible. The vision diminishes, the intelligence is dulled, and the patient becomes depressed, gloomy, and apathetic; during sleep he is haunted by nightmare. Sometimes the patient is exhausted, and this exhaustion can go as far as syncope, loss of consciousness more or less prolonged; nausea, rarely with vomiting; slow pulse, sometimes to a very marked degree. Then the patient may be taken with vertigo while in the street, and he reels like a drunkard. He may forget his name or certain words, and is aware of this fact (verbal amnesia); the diminishing intelligence obliges him to give up work. Certain persons experience these symptoms only when they are exposed to certain influences, such as cold, &c. For example, take a doctor in possession of all his intellectual faculties, who at certain intervals—especially when he has been exposed to cold—experiences giddiness and paralytic phenomena after presenting some fifteen years past the symptoms of cerebral compression. This patient, cured by iodide of potassium, owes, without



doubt, these transient cerebral symptoms to a difficulty in the cerebral circulation, caused by an endarteritis more or less pronounced, according to the influencing exterior conditions. After these symptoms, pointing to a difficulty of circulation in the brain, appear paralytic phenomena. For example, a patient, after some discomfort—such as a slight loss of appetite, lessening of hearing or of sight—goes to bed as usual; the next day he continues to sleep, his eyes are closed, and the respiration is stertorous. The limbs are relaxed without paralysis; the sensibility to a prick or a pinch is preserved. Often a certain time goes by—relatively quite long—before the symptoms become serious and of a marked intensity; the paralysis is often limited to certain parts of the limbs, confined to one of them, or to one side of the face, for example. Rarely does the hemiplegia appear suddenly, and if so it is more likely caused by a tumour of the brain pressing on the artery, and thus producing obliteration. More frequently it attacks the patient slowly; he feels the attack coming on, and follows its progression—which is sometimes steady, at other times irregular.

As syphilis attacks in preference the base of the brain, it is not difficult to foresee that the oculo-motor nerve, and in general all the nerves of the eye emerging from the inferior aspect of the brain, the facial, &c., are frequently attacked. The hemiplegia of the face, a symptom quite important to note, is more often crossed than direct. The uvula is deviated, which shows that the nerve is attacked before it emerges from the aqueduct of Fallopius. The troubles in the intelligence can go as far as insanity, and the case cited in Rabot's thesis (Paris, 1875) is a good proof of this.

General paralysis of syphilitic origin is difficult to distinguish, nevertheless a characteristic symptom of the affection—"le délire des grandeurs"—is often wanting in this case. Sometimes at the same time with the different symptoms already enumerated, and coinciding with the hemiplegia, the coma may be accompanied by convulsions, or epileptoid attacks. At other times these attacks come on at the same time as the resolution of the limbs and the coma. These symptoms are generally of grave prognosis, and often indicate a final evolution of the disease. The symptoms caused by an arteritis are liable to disappear, so a hemiplegia can improve, or even get completely well; but once the lesion formed, and the artery completely obliterated, all efforts to cure are nearly useless. It is a common lesion which cannot be mastered—the territory, no longer nourished by the artery, cannot live, and is destined to die.

It is the necrobiosis of the tissue with complications which are dependent on it—encephalitis, meningitis, &c. The prognosis, as is seen, is always rather bad, and this affection demands the greatest attention on the part of the medical man; on the diagnosis often depends the safety of the patient, for a well-directed treatment can alone arrest, better, or cure this grave affection if taken in hand in time.

Can the lesions of the arteries be mistaken for other diseases? Can syphilitic arteritis be confounded with atheroma, tuberculosis, &c.? An attentive examination will show us that an arterio-sclerosis is never localised in one artery—the entire vascular system is invaded. The arteries are hard, resisting, resembling cords; they are, as Professor Peter says, “the rust of life,” and are more often present in old age. Thus, as Professor Fournier says:—“Every hemiplegia appearing in a subject under forty years of age, who is not affected by alcoholism or a lesion of the heart, is at least eight times out of ten, perhaps even nine out of ten, of syphilitic origin.” It is the same for epilepsy and ocular paralysis; it is evident that among this number we do not include patients with hereditary syphilis.

Tuberculosis resembles syphilis in certain ways, but it only rarely attacks small arteries, and especially the cerebral arteries; it attacks other parts, invading rather the sheath of the vessel and the connective tissue in which it is found embedded, agglomerated, and forming a mass circumscribing the calibre of the artery. Age also pleads in favour of syphilitic lesions; cerebral tuberculosis (meningitis, or other accidents) is nearly always the appanage of infancy. On the other hand, the treatment has a supreme action, and if we should recall to mind the old saying, “*Naturam morborum curationes ostendunt*,” we cannot help inclining towards the idea that these lesions on which iodide of potassium has so much influence are of syphilitic origin. Unfortunately, tuberculosis and atheroma still await their specific remedies, and therapeutics, in spite of all efforts, has hardly any power over these two terrible diseases. A symptom of arteritis, to which hardly any attention has been called, and which was in the first instance studied by Professor Vulpian, may have a certain diagnostic importance, and present a certain interest from the physiological point of view—this is cyanosis. The three cases on which this article is based are curious in many respects.

The first is that of a cook, aged twenty-eight, who came into the

Hôtel Dieu with a slight typhoid fever, with some spots of purpura on the inferior internal part of the right leg, over the tibio-tarsal articulation, with sharp pains in this region. Convalescence at the end of two weeks; internal pains were felt at the union of the superior one-third with the inferior two-thirds of the anterior internal face of the thigh, radiating along the course of the femoral. No fever; normal heart; no cord of lymphatics along the course of the vessel; palpation extremely painful; both dorsales pedis arteries are felt with difficulty; the left posterior tibial artery beats much more strongly than the right; at the same place, behind the malleolus, it is nearly imperceptible. When the patient got up, the skin of the leg and foot was cyanosed, and sweat appeared on the foot. Sometime after the progress of the disease became more encouraging, the pains disappeared little by little, cyanosis persisted for some time, the pulsations came back little by little, and seven weeks later the patient was discharged.

M. Barié <sup>(1)</sup><sup>a</sup> has also published some cases, and more recently Dr. Brunon <sup>(2)</sup>—at that time Professor Vulpian's *interne*—adds two cases, in which the symptom of cyanosis was very pronounced. Professor Vulpian admits that this modification in the circulation of the foot and leg may be explained by a diminution of the afflux of blood in the capillaries. Cutaneous cyanosis and dilatation of the veins are not present while the patient is in bed; the flow of blood in the arteries is not interrupted, but simply lessened. In the horizontal position the venous blood is pushed towards the thigh by a sufficient pressure, but in the upright position cyanosis becomes marked, the veins swell because the pressure transmitted by the arteries to the veins, *via* the capillaries, is no longer strong enough to overcome the obstacle opposed by the weight, and it consequently results in a relative stagnation of blood in the veins and capillaries. The feebleness of the pulse of the posterior tibial artery of the diseased limb confirmed the idea that the flow of blood was less free than in the healthy one, and it is easily understood how much the symptom of cyanosis merits one's attention, and also how important it may be in throwing light upon a diagnosis, when one has the good fortune to find it present. This sign, indicated by Vulpian, Barié, and Brunon, should be looked for in that cerebral arteritis which now occupies us; in fact, in the case where cyanosis of one side of the face or neck is remarked, this symptom should be a great assistance to the physician in the

<sup>a</sup> The numerals refer to the Bibliography at the end of this paper.

diagnosis. But this is, after all, a pathologico-physiological point of view, which is interesting, but useless to investigate, excepting the cyanosis—at least, in analogous phenomena derived from circulatory derangements, as indicated by Vulpian and Brunon. I found nothing in my patients, but nevertheless it appeared to me interesting to make an analysis of those facts, and to draw attention to them.

The origin of every syphilitic new-formation, as Professor Fournier has so clearly shown in his clinical lectures, is a cellular hyperplasia—that is to say, a local proliferation of cells more or less abundant—in a certain point of the economy. Diffused in the midst of an amorphous investing membrane, these elements infiltrate the parenchyma of the affected organ in various degrees, and by multiplication, finish by forming a nodose tumour, which was called a “node” in by-gone years, and to-day is called circumscribed or diffuse infiltration.

*En résumé*, in the first period of tertiary phenomena, hyperplastic deposits are found, interstitial formations in the interior of the affected organ. Later on this hyperplasia undergoes, as I have already said, one or the other mode of evolution which I will now briefly describe.

1. The cell elements may be full of life and remain endowed with vitality. In this case they multiply, are much proliferated, and form an organic mass containing in its meshes the normal tissues, in the middle of which this new formation had developed. This mass becomes condensed—at first cellular, it changes to cellulo-fibroid, fibroid, and at length fibrous. Little by little it retracts like all nodular productions, the normal elements of the organ are then found imprisoned and compressed, smothered up, as it were, by this proliferated and contractile mass, so that they atrophy, degenerate, and progressively disappear partly or totally. This new tissue takes the place of the fundamental tissue, and sclerosis is formed.

2. The cell elements, endowed without doubt with a less degree of vitality, are hastily disorganised when formed with difficulty; they are, so to speak, born dead. Almost as soon as the cells are united they tend to destroy one another, passing through a series of transformations of segmentation known as granulo-fatty degeneration. In short, these elements die *in situ*, and soon they only form in the heart of the living tissue a kind of detritus, having the aspect of a yellowish, caseous mass, tuberculiform, known as “gumma.” Among the principal points attacked by cerebral syphilis the following



should be signalised:—The Sylvian arteries and the basilar trunk, sometimes also the small terminal intracranial arteries. The lesions are generally limited to a very small extent, sometimes in two symmetrical points. A dilatation of an artery may be found, but oftener there exists a contraction following the formation of a kind of cicatricial tissue. The calibre of the artery is lessened by proliferation of young cells in the vascular parts of the coats of the vessels. This infiltration ordinarily follows the processes of sclerosis; the cells infiltrating the coats of the vessels form rigid meshes which, little by little, retract as in all nodular tissue, consequently causing reduction in the calibre of the artery. The processes may predominate, either in the external coats or in the internal coats, but whether there is periarteritis or endoarteritis the result is the same, and this distinction to-day has not the importance that certain authors attached to it, for often the two lesions exist together, and the vessel is so compressed that the lesions of the external coats are not long in acting upon the circulation in the same manner as the internal diseased coats. The artery being narrowed and diminished in calibre, the blood flows through it with difficulty, and it even finishes in obliteration; a fibrous mass then forms, in the same way as in ligature of the vessel. So in these cases, one finds at the autopsy—as in the case which will be described further on—the artery hard, resistant, containing a clot of blood, adherent and evidently formed on the spot, with a blackish fusiform prolongation of new formation. The artery may be, 1st, thickened in a variable extent, sometimes only in a portion of its circumference, at other times in the entire circumference—the artery is rigid and hard; 2nd, sometimes it only contains spots, patches which project on the internal or external surfaces of the artery; 3rd, exceptionally nodosities are to be found resembling grains of rice; 4th and last degree, the artery may be constricted, or even completely obliterated.

Among the authors who have reported cases of syphilitic arteritis I may cite Dittrich, Hayach, Virchow, Meyer, who found the cerebral carotid arteries obliterated in patients having visceral syphilis (<sup>3</sup>). One of these cases approaches one of my own to be related further on. The patient had had vertigo, persistent headaches, some epileptoid attacks, feebleness of the left side of the body, movements on this side being very weak; right less distinct; speech difficult and confused; at last coma came on, followed by death. At the autopsy the dura mater was found thickened,



adhering by means of fibroid tissue to the cerebral substance; the right carotid artery and its branches were obliterated by fibrous cords adhering to the walls of the vessels. The liver was full of cicatrices, containing several small tumours. Another case cited in Lancereaux's work (<sup>4</sup>) is most interesting, for it treats of a young man manifestly syphilitic, and the affected artery was examined microscopically. A young man, aged twenty-five, under treatment for five months for a syphilitic affection which could not be cured, succumbed rapidly after presenting symptoms of an encephalitis. The autopsy showed, besides some tumours of small size, the existence of a localised encephalitis, with a partial obliteration of both internal carotid arteries at their terminations. Both the affected arteries contained a new formation, rendering them thicker and notably narrowing their calibre.

It is evident in this case that it was not an atheromatous lesion but a circumscribed lesion formed of cells and spherical nuclei. Sternberg, Wells, and Weber found the same alterations in different arteries—cerebral, pulmonary, the aorta, &c.; these lesions, limited to one spot, are characteristic of the tertiary period of syphilis, whether the thickening of the coats be external or internal. A case in Prof. Trélat's service at the Salpêtrière(<sup>5</sup>) was that of a woman having lypemania, and who died soon after entering the hospital. The autopsy showed: The basilar trunk had a whitish colour, with thickened walls; on section it is found not to be an atheromatous artery, for the vessel is supple, elastic, the external coat being the only one thickened. The Sylvian artery presented nodosities the size of a bean, white, and irregular. On a great many of the small branches fusiform nodosities were found, measuring from 3 millimetres to 1 centimetre, being still larger in the arteries destined for the cerebral substance. The arteries were very narrow, and even obliterated, adhering by their external surface to the neighbouring cerebral substance, particles of which were found adhering to the artery when this organ was torn off. The microscopical examination revealed an acute arteritis, with thickening of the internal coat, and a very active proliferation of the connective tissue elements in the middle coat. The basilar trunk also presented a considerable thickening of its internal coat. This nerve-tissue was composed of fusiform or branching cells in the midst of an intermediate, finely-fibrous substance; the elastic coat was intact, the muscular coat was infiltrated by round embryonic cells and furrowed by capillaries gorged with blood; the external

coat was infiltrated with round cells grouped in linear masses along the perivascular lymph spaces, and sometimes forming considerable globular masses. The vasavascularum were dilated and filled with blood. Several were also surrounded by embryonic cells, recalling to mind the vessels which are seen in erysipelas. The calibre of the basilar trunk was diminished by sanguineous thrombi. The nodosities of the small arteries were anatomically made up of similar alterations; it was also remarked that the canal of the artery was obliterated by a proliferation of the internal coat. Lately Lancereaux, Marotte, and Jackson have published cases of obliteration of the left internal carotid artery. No one is unaware that Prof. Lutzgarten, of Vienna, believes he has discovered in the microscopical sections of chancre the specific bacillus of the disease. According to this gentleman, this bacillus is always found included in the migratory cells which are endowed with locomotion, met with oftener on the border than in the midst of the infiltration; it loses its colour by the action of acids, while alcohol has no action whatever on it. Doutrelepon, of Bonn, and Schultz found them in the syphilitic products; this bacillus does not abound, but it may be cultivated, and its inoculation, which has been attempted several times, gave no positive result, so that one is reduced to recognise them by their form, their manner of implantation in the tissues, and the special proceedings for colouring them. The experiments of Alvarez and Favel, made under the direction of Prof. Cornil, have very much shaken the view as to the problematic specificity of this bacillus; they found the same bacillus in the normal secretions of the external genital organs and in the smegma præputiale; on the other hand, they did not find it in the microscopical sections of the tissue of indurated chancres, but only in the secretions of mucus patches, ulcerated patches, ulcerated syphilides, and different secretions of the external genital organs; whether these secretions are obtained from a syphilitic or a healthy person this bacillus existed in the same manner. For the time being it appears to me difficult to admit the specificity of Lutzgarten's bacillus, and I shall wait for new experiments. The treatment is simple: iodide of potassium and mercury in quite large doses alone can root out the manifestations of the diathesis, sustaining at the same time the strength of the patient. I shall nevertheless enter into some details. When should this treatment be commenced? In the first place, this treatment should be commenced as soon as possible, for cerebral syphilis in the commencement gives in quite easily, not, how-

ever, always, to antisymphilitic treatment; the longer one waits the more rebellious it becomes, and if it arrives at this period of disorganisation of which I have already spoken, it is in vain that we act vigorously against it, for it is too late. So, *en résumé*, cerebral syphilis should be treated the moment that the diagnosis has been made, as soon as the persistent nocturnal headache or the different troubles of the intelligence are present. Secondly, the treatment should be prescribed in a most energetic way; if only an anodyne treatment is applied the patient but rarely recovers, and as Prof. Fournis says, "to do little or less than the necessary measures is to do about nothing at all;" it is necessary to employ, according to the same gentleman, "le traitement d'assaut," combining mercury and iodide of potassium, the two great antisymphilitic remedies. The iodide should be given the greater part of the time by the mouth; very exceptionally, in cases of complete intolerance, by the rectum; it should be given in doses of 3 grammes a day in the beginning, which dose will be progressively increased to 4, 5, 6, and even 8 grammes in the 24 hours. It is rarely necessary to give over 8 grammes, and if given in larger doses, intolerance, gastro-intestinal troubles, and supersaturation will rapidly be produced. In order to make the iodide acceptable to the patient, it may be mixed with wine, water, beer, or soup, and taken in several doses at the commencement and middle of the meal. Mercury may be administered by the mouth in the form of mercurous iodide or sublimate. The green iodide, in doses of 10 to 20 centigrammes, the bichloride from 2 to 5 centigrammes, calomel in fractional doses during four days as follows:—

|         |   |   |   |                 |
|---------|---|---|---|-----------------|
| 1st day | - | - | - | 25 centigrammes |
| 2nd day | - | - | - | 50           ,, |
| 3rd day | - | - | - | 75           ,, |
| 4th day | - | - | - | 1 gramme.       |

Each day the dose should be given in ten parts. This method of treatment has given good results in the hands of Dr. Hillairet, who is its author, but it demands an active watchfulness, and the medicine must be stopped after this stage for a week, and then recommenced. Frictions of mercury have given me good results, for they do not tire the stomach, and at the most produce only a little erythema, stomatitis, and slight salivation—accidents which are in no way dangerous, and which may be done away with by administering chlorate of potassium or alum in the form of gargle or potion. To prevent the organism becoming habituated—which in

a long treatment destroys the good effects of a medicament—it is very useful to alternate the mercurial frictions with iodide of potassium, giving each remedy alternately for three weeks at a time. The treatment should be continued until the symptoms have completely disappeared, and even after, for later on the diathesis can become active again; so the patient should be advised to follow a special course of hygiene and an appropriate treatment—that is to say, several periods of mercurial treatment as well as to take the iodide for some years. Purgatives and cutaneous revulsives have also their indications, and lastly, outside of the treatment of the specific affection the general condition of the patient necessitates a careful attention. The strength must be kept up by a tonic regimen—iron, quinine, bitters, cod-liver oil, the sulphurous thermal mineral waters of Uriage (Isère), Bagnères-de-Luchon, &c., in France.<sup>a</sup>

CASE I.—Pauline G., aged twenty-four, dress-maker; entered the Hôtel Dieu of Rouen, May 23rd, 1888. At the commencement of the same year the patient had been treated during a month in the hospital. At that time she had very frequently vertigo and giddiness. The following facts were obtained from the patient:—Had been healthy up to the age of twenty, when she had a severe attack of enteritis, which profoundly altered her health; since then she had been subject to vertigo and giddiness. Sight is lessened, and at certain moments she can distinguish nothing; all appears foggy. At different times she has had pains in the articulations, but they did not oblige the patient to remain in bed or to give up work. No cough; nothing abnormal in the thorax. Quite frequent palpitations of the heart, with a sentiment of oppression and smothering, especially on the least effort. Appetite capricious; between meals the patient experiences faintness and twitching of the stomach; no vomiting. Menstruated at sixteen years; at the time of their appearance the menses always caused a certain malaise. They were difficult, and not at all abundant; very frequent leucorrhœa. In May, 1887, she suffered greatly on account of a delay in their appearance, and had an incomplete paralysis of the left side. This phenomenon persisted for some days (about eight), then diminished, so that a month later all was ended. No trace of syphilis; the patient denied having had any accident, so that the diagnosis remained very undecided. On her returning on April 10th she informed me that her menses had not returned, and that she was taken with the same symptoms as in the preceding year. Some days ago she lost consciousness, and on coming to she was paralysed on the left side; incomplete hemiplegia. Her strength has since slightly

<sup>a</sup> Schinznach, in Switzerland, can also be recommended as excellent in syphilitic affections.—TRANSLATOR'S NOTE.



returned, but the patient still feels, especially on the right side, a sharp persistent pain.

April 11th.—Patient feels feeble on the right side; she still can move the right arm and leg a little. When she laughs, whistles, or speaks, the mouth is strongly deviated to the left; the cheeks are flabby, eyes are equally opened, but she cannot look straight forward; tongue is deviated, the sensibility slightly altered, especially on the paralysed side; the face is pale, and has a fatigued expression. On auscultation of the thorax nothing abnormal was found; hissing is heard at the base of the heart; bruit of anæmia, slight hyperæsthesia of the ovaries; sensation of lump in the throat. Treatment consisted in sulphur baths and tonics. The phenomena progressively subside; the patient began to get up and take a few steps, dragging the leg after her; the step is tottering, and the patient holds on to the beds in order to walk. The hand is still weak, and the arm heavy; mouth deviated to the left; sight is better, although often hazy. In spite of the advice given her to remain, the patient left the hospital improved, but dragging her leg. She could not return to her work. -

*Second Sojourn*—May 23rd.—Patient was found in the street struggling as in an attack of epilepsy, and is brought to the Hôtel Dieu. When in the ward the patient had another attack; revulsives were applied to the legs and chest, and cold water was thrown on her, and the attack abated. A little later another attack came on; slight clonic movements, the head is turned from side to side on the pillow; pulsation of the eyelids; the arms are agitated by jerking movements; the hands are clenched with the thumb inside. In forced adduction the fingers were slightly flexed, the face pale; sensibility slightly marked; frequent respiration. Several attacks succeed one another. Coma continued, and at the evening visit the patient is still in the same condition. A purgative injection was given; mustard plasters applied to the thighs, legs, and thorax. The patient was agitated, and appeared to feel; she gave a few little inarticulate cries, opened her eyes and shut them immediately.

May 24th.—Coma still exists; the members are in complete resolution, and the right arm when lifted falls more relaxed than the left arm; the leg as well falls. Irritation of the skin by pricking or pinching hardly produces any movements; there are a few contractions of the face. The head is turned to the right and the eyes as well—they look towards the affected side. The gaze is fixed; no strabismus; the pupils appear dilated, but not irregular. The labial commissure is drawn to the left; the patient has not urinated or had a stool since she was brought to the hospital. No vomiting, so the diagnosis of meningitis is discarded. Respiration slow; heart-beats are about normal. The injection not having produced an effect, 50 centigrammes of calomel are given in one dose, but also without effect. A purgative injection is given, which

produced a slight stool; the urine was withdrawn by a sound, and contained neither albumen nor sugar.

May 25th.—In the evening had an epileptoid attack. If her head is raised up the patient gives some little cries; the neck is stiff, the left arm is slightly contracted. The eye follows the persons who pass by the bed.

May 26th.—Ecchymosis on the left leg, caused by her fall; on the internal part of the left foot, and on the dorsum of the right, are found two excoriations, measuring about 3 centimetres each. The patient urinates and defecates in bed; no consciousness. The questions addressed do not wake the patient from her somnolency; the eye no longer follows the finger. Pricking and pinching produce no movement of the arms, but in the right leg slight movement can be produced; entire inertia on the left side. During the day the patient complains a great deal, and gives little cries. In the afternoon she can no longer swallow; dysphagia exists.

May 27th.—Same condition; complete resolution; face pale; the saliva runs from the right commissure of the mouth; the head still turned to the right, towards the affected side. Eye fixed, with nystagmus; oscillation and trembling. Pupils equal, and not dilated; left foot turned in; noisy, stertorous respiration. Pain causes a grimace on the right side of the face; the left remains immovable.

May 28th.—Same condition; coma more profound; stertorous respiration, with interruptions (Cheyne-Stokes' respiration.) Pulse frequent, feeble, irregular; 40 respirations per minute. Temperature,  $39.5^{\circ}$  C.; incontinence of urine and faecal matter. Died at half-past three in the afternoon.

*Autopsy eighteen hours after Death.*—Lungs healthy; a few adhesions of the left lung. Heart flabby, slightly fatty; nothing of note in the large vessels or aorta. Liver slightly fatty; spleen normal. The right kidney presents, on examination, a furrow on the posterior surface, dividing the organ into two parts. This sulcus, in the form of a cicatrix, is about one centimetre in width, broader on the anterior surface, in such a manner that it is situated about midway between the extremities of the kidney. In the middle of this sulcus a whitish lump, surrounded by a reddish areola, is found. This surface also presents other little irregular projections, and a multitude of small white nuclei, the size of a pin's head, on the upper part of the cicatrix. The left kidney presents more advanced and more generalised lesions; it is atrophied, and in certain parts the cortical substance, has completely disappeared. These lesions, and in particular the small tumours as well as the cicatrix in the form of a furrow, seemed to be due to syphilis. The corpus callosum has a small yellowish nucleus the size of a pea on the left side. On the right side are found several softened spots in the centrum ovale minus, especially in its middle third;

a more considerable spot of softening is remarked in the left side of the corpora striata. There is a very extended softening, reaching to nearly the internal capsule; this nucleus enters deeply and nearly reaches the insula. On section a yellowish liquid flows out. The same lesions, only more advanced, are found in the occipital lobe. The left Sylvian artery is narrower than the right one, and at first sight offers a whitish aspect. On incising the artery at this point a yellowish-white, hard, adherent clot is discovered, on each side of which is a blackish stratified clot extending into the various branches of the Sylvian artery. It is to this organised clot, evidently formed on the spot, that the cause of softening is due. The uterus is voluminous, presenting a notable thickening towards the fundus, and containing a foetus of three and a half months, dead for some time, for it was macerated, and the epidermis was detached in several places.

CASE II.—D., aged fifty; entered Hôtel Dieu Jan. 12, 1889; married; has had eight children, the last child born dead in 1870, the others were born living, but died young, at about the age of nine months. Her husband is well, but is subject to obstinate sore throats, and the patient herself is also subject to the same affection; persistent headache in the frontal region. Jan. 7, while at work at the theatre, where she is dresser, she had become dazed, and would have fallen had she not leaned against the wall. When this passed away she noticed that her left leg and arm were very weak; she dragged her leg after her, and in the beginning she could not sit down without falling to the left. The sight was troubled, and she could not distinguish objects before her. Returning to her home in a carriage, she there remained until Jan. 12. Seeing that she became no better, she entered the hospital. What draws attention at first sight is her way of speaking. Speech is slow, jerking, as in subjects having medullary sclerosis; the right eyelid is drooped; the eye projects (divergent strabismus very pronounced; patient sees an object placed at her side without turning her head; no diplopia; divergence of rays is destroyed). Left eye is intact; when the patient stretches out her hands a slight trembling is observed; the more she does so, the greater the nutation. The patient denies any excess in alcohol, and said that she had trembled for the last five or six years. Liver and spleen present no alteration; lungs and heart give no pathological sign; no atheroma of the arteries. A saline purgative was given on the morning of her entering—two grammes of iodide of potassium.

Jan. 15.—Patient complains of excessively violent pains in the frontal region, and in the neck and legs, especially in the right; nevertheless, no traces of the diathesis are to be found on the body. Examination of the urine shows absence of sugar and albumen. The right eye causes great distress to the patient; in order to distinguish objects she is obliged to

shut the right eye; without this precaution she has vertigo. The images formed in the eye are slightly inclined, and the foot of the bed in front of her appears to her inclined downwards, and to the left; looking with both eyes the image of the right eye is situated at the left of the one seen by the left eye; pupil is dilated; the ophthalmic ganglia (motor root) is paralysed, the pupil no longer contracting when exposed to strong light. The troubles of the right diplopia, &c., are all due to paralysis of the ocular motor nerve; thus the upper eyelid is lowered, and the patient cannot completely open her eye. Slight anæsthesia on the right and on all the left side of the face.

Jan 21.—Pain in the cervical region; no notable improvement; ophthalmoscopic examination reveals no appreciable lesion.

Jan. 28.—Pain in the cervical region has disappeared.

Feb. 4.—Patient leaves upon request, although imperfectly cured; the eye is more opened and the sight less troubled. The patient was seen by myself at her home; was in the same condition; the eye was only half opened, and the patient cannot direct herself alone; the nutation and trembling are still very accentuated. Since leaving the hospital the patient has not improved—rather the contrary; without doubt, because she took little pains to follow the treatment prescribed.

CASE III.—D., dressmaker, aged twenty-three, entered hospital Jan. 7, 1889. Nothing to note in her antecedents. Her mother died asthmatic, her father died shortly after her birth, and she cannot give any information as to her disease. Brought up on the nursing-bottle at home, she has always suffered. Two years ago she had a disease of the intestines, but since has been quite well. In June, 1888, she noticed pimples on the genital organs and legs, which disappeared, leaving yellowish, copper-coloured spots, to-day still perfectly visible. At the same time the patient said that she experienced a persistent sore throat, and on attentive examination of the mucous membrane of the lips, small white patches may be observed resembling mucous patches. Examination of the eyes reveals an inequality of the pupils. The pupils were irregular, and towards the month of July she was obliged to consult a doctor, who gave her a collyrium, the name of which she has forgotten, and a mixture of iodide of potassium. Some days after her entrance at the Hôtel Dieu, a few drops of atropin were instilled into the eyes, and by the ophthalmoscope white streaks are found extending from the iris to the anterior surface of the crystalline; consequently a syphilitic iritis. On the evening of Jan. 5th the patient noticed that her right arm became heavier, and that she could not move it; the right leg also was weak and could not support the weight of the body, and was dragged in walking; the mouth was turned to the left. On entering the right arm and leg are nearly completely paralysed, the sensibility is unaltered, the speech is difficult, and the mouth is drawn to



the left. When the patient laughs or whistles this is more marked; the commissure is drawn to the left; the right side is immovable, otherwise normal. On the neck small white spots are found scattered over a brown-coloured surface, which are the traces of a pigmentary syphilide.

Jan. 20.—Appetite is good, the digestive functions are unaltered; the patient eats two meals, and an antisyphilitic treatment was given: iodide of potassium and 2 of Sédillot's pills.<sup>a</sup> To avoid stomatitis an alum gargle was ordered.

Feb. 2.—The arm is better; notable improvement under the influence of the iodide.

Feb. 6.—The patient commenced to walk, although the leg was dragged after her; the arm still weak. Quinine wine; every other day a sulphur bath. The following days her condition improved, the leg is dragged less and less, and the arm commenced to be useful, although weaker than the healthy one.

March 6.—The patient asks leave to go, although imperfectly cured. She returned some time after for the same symptoms, but this time they are less severe, and the patient left after a short sojourn, imperfectly cured it is true.

CASE IV.—C. L., aged forty-three, labourer, admitted Feb. 17, 1889. No anterior disease, excepting a chancre in 1875, for which he was treated at this hospital (Hôtel Dieu). At thirty-five he had a nasal polypus, obliging an operation. Since then he has had frequent and prolonged headaches, especially in the frontal region. His hair fell out, but he pretends that this is hereditary in his family. In his youth he had an abscess in the external angle of the orbit; this was incised, and the cicatrix prevents him from completely opening the lids of the right eye.

Feb. 12, that is to say, five days before entering the hospital, he perceived that his right leg was weak, likewise the arm of the same side, which he employed with difficulty; his leg dragged, and the arm felt heavy. On admission the right side was found paralysed nearly completely; the left upper eyelid drooped, closing the eye; the globe was slightly turned towards the external angle; the pupil of the right eye was more dilated than the left; binocular vision was impossible; diplopia existed; speech was difficult and hesitating, the patient speaking with right half of the mouth, the left being quite immovable; the uvula was deviated to the left; the soft palate appeared relaxed. For two days the patient has not been able to take food; when he does, either solid or

<sup>a</sup> Sédillot's pills are thus prescribed:—

R. Mercurial pomatum, 3 grammes.

Medicated soap, 2 grammes.

Powdered liquorice, 1 gramme.

M., and make 60 pills.

—Translator's Note.

liquid, he is taken with a violent cough, oppression, respiration ceases, and the liquid or food, in greater part, returns by the nose. Sensibility is everywhere preserved. On the lower part of the thorax and abdomen were brownish-yellow spots of pityriasis versicolor, which disappear, so the patient said, after one sulphur bath. In the left groin a cicatrix of a bubo was found, which is retracted, white, and puckered.

Feb. 12.—As the patient could swallow nothing, alimentation by means of an œsophagus sound was tried, but the patient could not stand this, as attacks of suffocation followed, so it was abandoned. When the patient is asked to walk, he is obliged to be supported to keep from falling, the vertical posture is impossible. No muscular weakness; the patient squeezes with the same force with the right as with the left hand. Nothing abnormal in the heart or thorax; urine normal. Treatment consists in mercurial frictions and a purgative injection.

Feb. 20.—The patient has been able to drink a little and to take nourishment by a pipette. The eye opens a little, and the paralysis of the ocular motor nerve is improving. Blister applied to the neck, mercurial frictions in the armpits and groins.

Feb. 23.—The patient continues to drink, employing a pipette, and takes some thin soup.

Feb. 27.—Notable improvement. Two of Sédillot's pills, 2 grammes of iodide of potassium in a mixture. Gargle, with 4 grammes of chlorate of potassium.

March 1.—Same condition.

March 10.—Improvement continues; the eyelid can be raised quite easily; speech is now free and clear. The patient takes food naturally. No more dysphagia. Diplopia still exists, but the patient avoids this inconvenience by closing one of the eyes.

March 20.—Patient walks well, and his agility has returned; the diplopia only persists. The patient uses spectacles, with a piece of paper stuck over one of the glasses, so that by this means he can work and read without getting tired.

April 5.—The patient asks to leave. Speech is free; the mouth still is slightly deviated, and diplopia persists. This patient I saw not long ago (four or five months after leaving the hospital); he has taken up his work without suffering. However, in the evening he cannot distinguish objects, and sometimes he has vertigo when he looks too long at the same thing. He always wears his spectacles. Unfortunately he has neglected a little the treatment that he was advised to continue.

#### WORKS CITED.

[The numbers correspond to those in the text.]

- |                                    |                              |
|------------------------------------|------------------------------|
| (1) "Revue de Médecine," 1881.     | (4) "Traité de la Syphilis." |
| (2) "Archives Gén. de méd.," 1884. | (5) Rabot. Loc. cit.         |
| (3) Rabot. "Paris Thesis," 1875.   |                              |

# PITKEATHLY

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## PART II.

### REVIEWS AND BIBLIOGRAPHICAL NOTICES.

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*The Natural History and Relations of Pneumonia: its Causes, Forms, and Treatment. A Clinical Study.* By OCTAVIUS STURGES, M.D., Cantab., F.R.C.P., Physician to the Westminster Hospital and the Hospital for Sick Children, Great Ormond-street; and SIDNEY COUPLAND, M.D., Lond., F.R.C.P., Physician to the Middlesex Hospital. Second Edition. London: Smith, Elder, & Co. 1890, 8vo. Pp. 452.

THE first edition of this interesting work saw the light in 1876. It attracted the attention of physicians as a monograph of sterling merit on the fascinating subject of Pneumonia. In the preface to this, the second edition of their work, the authors point out how extensive the literature of the disease has become in recent years—particularly in regard to its ætiology, epidemic prevalence, infectiveness, and bacteriology. An index at the end of the volume contains the names of the chief historians of the disease called “pneumonia”—or as we would prefer to express it, that group of pulmonary diseases or inflammations included under the generic term “pneumonia.” Pre-eminent among the long array of names stand those of Grisolle, Jürgensen, and Wilson Fox, as representative authorities on pneumonia in their respective countries—France, Germany, and Great Britain.

Drs. Sturges and Coupland particularly acknowledge their indebtedness to the labours of the Collective Investigation Committee on Pneumonia, appointed by the British Medical Association in 1884—a Committee which gathered together the facts relating to more than one thousand examples of the disease occurring in various parts of the United Kingdom.

The foregoing facts will show how comprehensive have been the researches of the authors; but the chief feature of the work before us remains to be mentioned and that is, its clinical character. For example, the ninth chapter, extending over 36 pages, includes abstracts of sixteen illustrative clinical records, while a number of

additional cases illustrating certain varieties and associations of the disease are incorporated in the text, and may be found by reference to the index. By-the-by, in this ninth chapter, the ugly misprint "sonero-ribilant" (for "sonoro-sibilant") occurs in the fourth line from the bottom of page 157.

The work is divided into four Parts, including twenty-one chapters. The first part is devoted to the clinical history and morbid anatomy of the disease; Part II. to its varieties and counterfeits; Part III. to its ætiology and pathology; and Part IV. to its treatment. The book concludes with the list of authorities already referred to, and a general index.

Chapter II., on the Forms of Pneumonia, opens with an allusion, couched in a politely sarcastic vein, to Sir William Aitkin's dogmatic definitions of diseases "after the manner of the exact sciences." At the same time, the authors' ideal pneumonia is defined as "that form of lung-inflammation which, whether fatal or not, is characterised by sudden onset, well-defined symptoms, distinct anatomical stages, and limited duration" (page 24).

We need not here delay to analyse the clear and for the most part excellent clinical description of pneumonia, defined as above, which is contained in chapters III. to VII. inclusive. But in Chapter VIII., on the "Elements of Prognosis," our attention is arrested by the statement that the authors' "own experience suffices to show that, while no distinction whatever can be made as between the left side and the right, *apex pneumonia is not so fatal as basis*; and further, that *it does not, as is often supposed, subject the patient to the risk of tubercular phthisis.*" Again, the extent of local inflammation is not more important as a factor in prognosis than is the degree of general constitutional disturbance. Far more liable prognostics than the more or less wide extent of lung implication are continued high fever, and an increasing rate and smallness of the pulse. This latter sign means that the heart, already embarrassed in its action by the disordered pulmonary circulation, is further weakened by the pyrexial state. A feeble, fluttering, or imperceptible cardiac impulse, a diminished shortened first sound, and a pulse-rate above 120 with irregularity or intermittence are ominous signs. A pulse-rate of 140 to 150 is of almost fatal import. It is to the heart, then, that we must chiefly look for indications of the probable outcome of the case, although it is quite true that the issue of pneumonia is very largely affected by the co-existence of disease in other organs—notably the kidneys.

Some statements made in connection with this question of the effect of complications on the prognosis of pneumonia we feel bound to criticise—such, for example, as the statement that “of the *acute specific diseases*, typhus is the most to be dreaded.” Surely typhus, particularly at the present day, can scarcely ever occur as an intercurrent complication of acute pneumonia. On the other hand, it is pretty clearly established that true pneumonia is a very rare complication of typhus—the pulmonary hypostatic congestion of which has little in common with pneumonia beyond the extravasation of a fibrinous exudation into the air vesicles. The curious thing is that our authors admit all this in another part of their work—Chapter XI., on “Pneumonia associated with other Acute Diseases.”

The other statement to which we take exception is that “erysipelas is occasionally complicated with pneumonia or may arise in its course.” What we hold on this subject is that there is undoubtedly such a thing as erysipelas of the lung, and it is more rational to adopt this view than to write as Drs. Sturges and Coupland have done in the sentence quoted above. Many cases of *Pneumonia migrans* are, we think, nothing more or less than erysipelas of the lung. At the beginning of Chapter X. the authors refer to the clinical fact that “pneumonia will sometimes spread from its first place like erysipelas,” and they shortly afterwards speak of “this so-called erysipelatous form of the disease.” We would go further and omit the qualifying term “so-called,” believing that the disease is really erysipelas. This opinion receives confirmation from the frequent occurrence of erysipelas in the same district with pneumonia. Thus, in one series of 350 cases of pneumonia brought under the observation of the Collective Investigation Committee, and quoted by Drs. Sturges and Coupland, erysipelas was prevalent at the time in 70; in a second series of like number, it was prevalent in 55, and in a third in 63 cases.

In discussing—in Chapter XVIII.—the question whether pneumonia is to be regarded as a specific disease or a mere local inflammation, the authors mention the fact that, more than two centuries ago, Huxham employed the term “Pneumonic Fever.” Hoffmann did the same, and in our own day the name of Jürgensen is especially associated with this teaching. Dr. Austin Flint would place the disease among the essential fevers, and prefers the term “pneumonic fever” to that of “acute lobar pneumonia,” while Dr. T. H. Green writes (Quain’s “Dictionary of Medicine,” Art.

"Inflammation of Lungs");—"Acute pneumonia is undoubtedly to be regarded as a general disease, of which the pulmonary inflammation is the prominent local lesion." The authors sum up the whole argument from this point of view in these sentences (pages 372 and 373):—

"(1.) Pneumonia is a specific general disease, of which lobar inflammation of the lung is the local manifestation.

"(2.) The most constant cause of pneumonia is Fraenkel's diplococcus, but there are other viruses (*sic*) which may evoke it.

"(3.) Chill and other causes—some more, some less—distinctly observed in that relation, are to be regarded only as secondary or predisposing.

"(4.) The pneumonic virus may, and often does, excite inflammatory disturbance in other organs than the lung, and sometimes such inflammations may be excited without the lung participating.

"(5.) Exceptionally, pneumonia may be contagious."

The authors add—"Time will show whether or not these conclusions will be finally accepted."

Part IV., on "Treatment," is full of interest, especially the historical chapter (XIX.), in which the repulsive horrors of the "jugulant" method are duly set forth. "*Hujus morbi curatio*," said Sydenham, "*in repetitâ venæsectione fere tota est*." Remorseless bleeding is associated with the names of Tommasini and Rasori of the Italian school early in the present century, and even as lately as 1835 Bouillaud recommended for universal adoption the plan of bleeding "*coup sur coup*," which went by the name of the "jugulant method." By this plan pneumonia was to be strangled almost in its birth. Even Celsus did not go so far, and must not be represented as an indiscriminate bleeder. Speaking of pneumonia ("*De Re Medicâ*," lib. IV., cap. VII.), he says: "*Oportet, si satis validæ vires sunt, sanguinem mittere, sin minores, cucurbitulas sine ferro præcordiis admovere*."

Two chapters follow the historical review we have referred to—of these one is devoted to treatment in general, the other to the treatment of some particular symptoms. The authors conclude that pneumonias, from the therapist's point of view, may be divided into two classes:—

"The first of these, and at the present time numerically by far the larger, is sure of recovery, yet owes much to the skill and resource of the physician in rendering a painful affection as tolerable as possible. In the other, the more severe yet the smaller class, the final issue in life or



death depends largely—we cannot, of course, say how largely—on treatment, the treatment, that is to say, of certain common symptoms such as delirium, dyspnœa, and sleeplessness, of whose pernicious effect we are not more certain than of the validity of remedies in large measure to relieve them.” (Pages 443 and 444.)

With these sensible words before them we leave our readers to form their own judgment of a work which we have come to look upon as one of the best monographs on Pneumonia in the English language.

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*The Elements of Practical Medicine.* By ALFRED H. CARTER, M.D., Lond.; M.R.C.P.; Physician to the Queen's Hospital, Birmingham; Emeritus Professor of Physiology, Queen's College, Birmingham; &c. Sixth Edition. London: H. K. Lewis. 1891. Pp. 496.

It seems almost unnecessary to write anything on the subject of such a well-known work as that before us—a work of which six editions have appeared in some eight or nine years. This edition has been carefully revised; Dr. G. F. Crooke has assisted the author in the preparation of the section on General Pathology, and Mr. Malcolm Morris in the preparation of that on Diseases of the Skin. In spite of this the book has not increased materially in size, the author wisely preferring to give a broad and general sketch of his subjects rather than to go into minutiae. The style is clear and readable; and the author has successfully avoided the fault, so often committed in small books on a large subject, of packing so much information into a limited space as to become dry and almost unintelligible.

We must call attention to a few points which struck us in perusing the book. Renal dropsy is said (p. 6) to begin in the loose connective tissue of the eyelids or scrotum. That is true only of the dropsy of acute Bright's disease, or acute exacerbations supervening on chronic cases; in the chronic forms the dropsy, although still called renal, begins usually in the feet, being dependent on cardiac failure.

On page 11 we read that the clot which forms in a ligatured artery “extends in a backward direction until it meets a current of blood sufficiently strong to arrest its further progress.” We do not think that is a very intelligible account of the process; the clot extends backwards until some pervious branch of the

artery is reached, through which the blood is circulating, and by means of which circulation further stagnation of the blood is prevented; it is only the stagnant and motionless blood in the artery that clots.

We are glad to see Diabetes included among the General Diseases, and not relegated to the section on the kidneys—organs which have singularly little to do with this disease.

In the section on Lung Diseases we are sorry to see Dr. Carter does not make any distinction between râles and rhonchi, but uses these terms as synonymous. We think it is far preferable to limit each of these terms to a distinct meaning, as many of the most careful and accurate writers now do (*e.g.*, Bristowe, Hilton Fagge, F. Taylor, &c.), and to apply the term rhonchus only to dry, continuous, musical sounds, and râle only to moist and interrupted bubbling sounds.

In a book written mainly for beginners we think more attention might have been paid to the methods of physical examination:—Thus some tables might have been introduced illustrating the main facts relating to heart murmurs; the examination of the urine and sputum (especially the latter) might have been described at somewhat greater length. The Methods and Principles of Diagnosis must come before Treatment, and if in a book for junior students there is not room for everything, we should prefer to see the latter curtailed rather than the former.

On the whole, however, the book is very well arranged, and evidently has been found useful by many. We would especially recommend junior students commencing their hospital studies, who have not time or knowledge to read more complete text books, to read day by day in this work the articles on the cases which they see; they would find that in this way they were laying a solid foundation for future superstructure.

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*The Medical Annual and Practitioners' Index. A Work of Reference for Medical Practitioners.* 1891. Ninth Year. Bristol: John Wright & Co.

SOME idea of the labour and care bestowed on the production of this excellent Annual may be gathered from the fact that the index of the present volume contains nearly three thousand references to diseases and remedies. Everything that forethought and familiarity with the wants of the medical profession can suggest

has been done to preserve and increase the well-won reputation of this book, as a reliable guide in the manifold difficulties that constantly arise in general practice. Nor has the specialist been forgotten—his journals and monographs have been laid under tribute.

To enumerate the editors that have made this Annual so great a favourite with the profession would be to give a list of many of the best known names in British, French, and American medical literature.

The volume tells of unremitting care on behalf of all concerned in its production, and a fixed determination to deserve success.

Reference is facilitated by an alphabetical arrangement of subjects and a good index. Research is made a comparatively easy task by a synopsis of previous editions. Illustrations have been introduced where necessary to elucidate the text, and some of these are, in the present edition, coloured.

We hope the profession will show their appreciation of the work by securing copies. We are in an age of progress, and the medical practitioner who keeps abreast of the times is the one who ultimately succeeds. The man who is content with borrowing a friend's journal or "looking over" a brother practitioner's annual is not of much account in medicine.

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*Railway Injuries, with special reference to those of the Back and Nervous System, in their Medico-Legal and Clinical Aspects.* By HERBERT PAGE, M.A., M.C., Cantab. ; F.R.C.S. ; Surgeon to St. Mary's Hospital, and Lecturer on Surgery at its Medical School; Consulting Surgeon to the Cumberland Infirmary; Examiner in Surgery, University of Cambridge. London: Charles Griffin & Co. 1891. Pp. 148.

THE book before us is the outcome of Mr. Page's experience in the seventeen years during which he held the post of surgeon to the London and North Western Railway Company, a position in which his opportunities of observing all sorts of railway injuries have been exceptionally extensive. On this account alone, a treatise on a subject about which he is so eminently qualified to speak with authority would demand the most careful perusal by all surgeons, and especially by those who may be called upon, either by the patient or by the railway company, to deal with railway injuries.

But independently of the qualifications and position of the author,

the book itself deserves the most careful study. It is, in our opinion, one of the safest guides through the complications and intricacies which beset the medico-legal aspects of these railway injuries. Throughout the book we are struck by the absence of all bias, by the judicial spirit which pervades its pages, by the fairness with which symptoms and opinions are weighed, and the justice of the conclusions which are drawn. Thus, in speaking of the neurasthenic conditions which not uncommonly follow on these accidents, and which in themselves are serious enough, the author says (p. 29):—"On the one hand, we may hear the condition regarded as evidence of serious and irremediable pathological change in the chief centres of the nervous system; and, on the other hand, no clear history of pronounced shock or collapse at the time of the injury being forthcoming, the symptoms are deemed unreal, and the *bona fides* of the patient is called in question. The mistakes are at opposite ends, and I hardly know which is the worse for the patient."

The present book is based upon one written by Mr. Page in 1883, entitled "Injuries of the Spine and Spinal Cord and Nervous Shock;" but it differs in many particulars from it. In the former work much space was devoted to proving that the nervous symptoms observed after railway injury were not to be attributed to meningo-myelitis of the brain and spinal cord—the theory maintained by Mr. Erichsen in his book on "Concussion of the Spine." In the present volume the arguments employed in 1883 find no place, as the above theory has been definitely abandoned by all those who have to do with injuries of this class, not only in these countries and in America, but in France, Germany, and elsewhere. The view now generally adopted, and which the author so ably upheld in his former work, is "that most of the strange nervous symptoms so commonly seen after railway accidents, were not due to physical injury sustained by the spinal cord, but were the more or less immediate concomitants of the profound mental emotion aroused by the unquestionably special features and incidents of every collision. . . . The accompaniment of some form of injury to extra-spinal, muscular, and ligamentous structures was at the root of the entirely erroneous notion that the nervous symptoms were due to lesion in that part of the central nervous system which has its seat in the spinal column."

The first chapter deals with these various forms of extra-spinal muscular and ligamentous injuries under the title of "Injuries to



the Back." At page 20 there is a paragraph which all surgeons who have to deal with railway injuries should ponder over carefully. After seventeen years of constant observation under circumstances peculiarly favourable, the author says:—"I have seen no case of acute traumatic meningitis following railway injury, nor any in which I could satisfy myself of the presence of subacute or chronic meningitis as the basis of the symptoms of general nervous shock which are frequently seen after railway collision." And yet, how often such a plea, urged in law courts in order to induce juries to assess large damages, is supported by medical testimony. We trust that in the future we shall hear less in such cases of that mysterious injury, "concussion of the spine," with its equally mysterious meningo-myelitic sequelæ. Again, it is sometimes urged that, although the injury to the back may at the outset have been obscure, there is a danger that ultimately, as a consequence of the injury, the symptoms of degeneration of the spinal cord may supervene. The author, admitting the great importance of such a statement, has given the subject careful study, and after following up the after history of such cases of injury, and after inquiry "made by direct oral and written communication with many professional brethren in all parts of the country, he comes to the conclusion that it must be admitted that secondary and remote degeneration of the spinal cord, in cases where there has been no distinctive evidence of injury, is very rare indeed. Nor have I been able to discover any grounds for thinking that the injured in railway collisions, numbering many thousands since the first accident happened, have afforded a larger proportion of those degenerative system diseases of the spinal cord . . . than have those persons who have not been exposed to the same influences." Chaps. II. and III. deal with general nervous shock. The author calls attention to the difference between the collapse which comes on immediately after the receipt of a severe injury and the shock which is produced by purely mental causes, such as the fright attending a railway collision, in which the manifestations may be both delayed and prolonged; and he quotes the words of Mr. Furneaux Jordan:—"In certain temperaments, wrought into a state of extreme excitement, a comparatively severe injury may not be attended with that degree of shock which, under other circumstances, would be seen. In those cases, however, shock is usually deferred, and not altogether averted; and it may be all the more severe, seeing that reactionary mental exhaustion, itself

a kind of shock, is superadded to the effects of bodily injury," "The collapse, however," says the author, "which in these railway accidents accompanies serious bodily injury, such as laceration of limb or fracture of bone, always excepting the collapse from severe concussion of the brain, is very rarely followed by the train of after symptoms indicative of general nervous shock." Again, he says, "It will be one aim of this work to explain how it is that the after-results of even very trifling initial shock from railway accident are often more lasting and serious than are the later nervous symptoms of those in whom the early collapse with extensive bodily injury, was originally more profound." In the latter half of Chapter II. the various symptoms of general nervous shock are separately discussed, and they may shortly be grouped together under the head of the symptoms of neurasthenia. The author draws a broad distinction between this condition and genuine hysteria, a distinction which, we think, ought to be more generally recognised and insisted on than is frequently the case. At the same time, we must bear in mind that these two conditions, neurasthenia and hysteria, are closely linked together, and are very often found side by side in the clinical picture presented to us. Neurasthenia, as it were, prepares the nervous system, or puts it into a suitable state, for the origination of true hysterical disturbance. "A very common sequence of events is for hysterical disturbances to be grafted on to the neurasthenical state—grafted on to it, and thereafter growing with it. I mean no more than this when I say that they are linked together."

The evil effects of anxious attention being fixed upon these neurasthenic symptoms is dwelt upon. A prolonged dispute about the claim for compensation and the anxieties and worries of a law suit aggravate the symptoms necessarily. The author suggests that under such circumstances it would be more appropriate to call them "litigation symptoms" than those of general nervous shock.

Chapters IV. and V. are very happily and appropriately entitled "The Fright Neuroses," a term which the author prefers to the more commonly used expression "traumatic hysteria." He discusses at length functional paraplegia, and gives some very interesting examples, not only of this condition, but of hypnotic catalepsy and allied disorders. The last three chapters deal respectively with treatment, malingering, and the medico-legal aspect of railway injuries. The book concludes with a bibliography and an index. We have only been able to allude cursorily to some of the many

interesting questions raised in this book, and we have only been able to do but scanty justice to it. It is undoubtedly one of the best books extant on the subject; it is written in a clear and interesting style; it is well brought out and clearly printed in good type on good paper; and it is a book which every medical man would do well to read before he presents himself for examination and cross-examination in the witness box in a railway case.

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*Illinois State Board of Health: Medical Education, Medical Colleges, and the Regulation of the Practice of Medicine in the United States and Canada. 1765-1891. Medical Education and the Regulation of the Practice of Medicine in Foreign Countries.* By JOHN H. RANCH, M.D., Secretary. Springfield, Illinois: H. W. Rokker, State Printer and Binder. 1891.

THOSE who are familiar with American medical literature know how thoroughly our Transatlantic brethren carry out their work. The present volume, which is produced by the Illinois State Board of Health, is no exception to the rule; it embraces the medical institutions of the whole world.

Such a book became a necessity in Illinois, which at present has a population of over five millions, of whom one million are foreigners. Its enormous resources attracted a population from all parts of the Continent and from Europe. A rich alluvial soil produced all the cereals and fed enormous numbers of cattle, sheep, and swine; and its immense fields of bitumen, occupying an area of 30,000 square miles, made it a great manufacturing centre; with all these advantages superadded to its position on the shores of the great lakes, Illinois could not fail to attain success. Even prior to the discovery of America by Europeans the Illini tribe of Indians—whose remembrance is perpetuated in the name of the State—recognised its natural resources.

All peoples except the English appear to have prized Illinois. Marquette, the first to explore it, in 1673 reported favourably of the country to Louis XIV., his countryman. La Salle, in 1679, was also favourably impressed, and in 1682 three French settlements were made—Crevecour, Kaskaskia, and Cahokia. When the French were driven from Canada, Illinois (1763) became English, but our politicians thought the great west was of no value. The teachings of the First Bellamont, the true founder of the greatness of the United States, were neglected, and in 1783

Illinois was ceded to the United States. Had there been no knowledge of its mineral wealth and fruitful soil the indifference of the English statesmen would have had some excuse, but as early as 1669 French settlers raised coal and pig iron, and lead had already been discovered.

To-day so many strangers crowd into the State, and the immigrants include so many doctors, that the State has found it necessary to give a detailed account of the medical institutions throughout the world, so that the Illinois Medical Board may be able to determine the value and validity of foreign diplomas, especially German ones.

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*Notes on the Examination of the Sputum, Vomit, Fæces, and Urine.*

By SIDNEY COUPLAND, M.D.; Physician to the Middlesex Hospital. London: H. K. Lewis. 1891. Pp. 52.

DR. COUPLAND has contrived to put together in a very small space a great deal of information on the examination of sputum, &c. His little book is calculated to be of much use to students in their hospital practice. The information contained in it has not been very accessible to the medical student, being scattered through works on Practice of Medicine, and Practical Pathology, and in them often mixed up with other matters of doubtful or obscure import, which render the subject more difficult and confused. This little book is admirably clear; large type is employed to mark out the headings, and practical directions are very fully given.

The general excellence of the work requires us to call attention to a few points we could wish altered. In describing the method of staining tubercle bacilli, we are directed to select and place on a cover-glass "an opaque particle of sputum *to (sic) size of half a pea.*" Surely this is too large an amount. In our experience a particle the size of the head of a good-sized pin is quite sufficient, if spread out sufficiently thin, to cover any ordinary-sized cover-glass.

The normal specific gravity of the urine is said to be 1020–1025. These figures are too restricted; many urines whose specific gravity is considerably under 1020 must be looked on as normal.

In the guaiacum test for hæmoglobin we are told to use a few drops of tincture of guaiacum. If the test is carried out in this way it will often lead to disappointment. The solution of guaiacum



must be fresh (which tinct. guaiaci often is not), and is best made at the moment of use by adding a grain of guaiacum resin to a little methylated spirit in a test tube.

But, after all, these points to which we have called attention are of minor importance, and do not seriously detract from the high practical value of the little book, which we cordially recommend to all students who are attending a clinical hospital, and watching cases there. Many practitioners also will be instructed by a reference to its pages.

*Are the Effects of Use and Disuse inherited? An Examination of the view held by Spencer and Darwin.* By WILLIAM PLATT BALL. London: Macmillan & Co. 1890. Pp. 156.

THE importance of this question is thus put by the author:—"It is evident that we can produce important changes in the individual." "We can strengthen (or weaken) his body; we can improve (or deteriorate) his intellect, his habits, his morals." But "will such modifications be inherited by the offspring of the modified individual?" "Can the philanthropist rely on such a tendency as a hopeful factor in the evolution of mankind?—the only sound and stable basis of a higher and happier state of things being, as he knows or ought to know, the innate and constitutionally-fixed improvement of the race as a whole. If acquired modifications are impressed on the offspring and on the race, the systematic moral training of individuals will in time produce a constitutionally moral race, and we may hope to improve mankind even in defiance of the unnatural selection by which a spurious but highly popular philanthropy would systematically favour the survival of the unfittest and the rapid multiplication of the worst. But if acquired modifications do not tend to be transmitted, if the use or disuse of organs or faculties does not similarly affect posterity by inheritance, then it is evident that no innate improvement in the race can take place without the aid of natural or artificial selection."

The author then goes through the most important facts which have been supposed to prove the truth of what he calls "use-inheritance," and shows that they will all bear other and more natural explanation. Through these details it would be impossible for us to follow him; but his criticisms and arguments are always fair and ingenious, and in many, if not all, cases just and cogent.

He concludes that the theory of use-inheritance is discredited as unnecessary, unproven, and improbable, and that the modern reliance on it is misplaced :—

“The effects of use and disuse, rightly directed by education in its widest sense, must, of course, be called in to secure the highly essential, but nevertheless *superficial, limited, and partly deceptive*, improvement of individuals and of social manners and methods; but as this artificial development of already existing potentialities does not directly or readily tend to become congenital, it is evident that some considerable amount of natural or artificial selection of the more favourably varying individuals will still be the only means of securing the race against the constant tendency to degeneration, which would ultimately swallow up all the advantages of civilisation. The selection influences by which our present high level has been reached and maintained may all be modified, but they must not be abandoned or reversed in the rash expectation that State education, or State feeding of children, or State housing of the poor, or any amount of State Socialism or public or private philanthropy, will prove permanently satisfactory substitutes. If ruinous deterioration and other more immediate evils are to be avoided, the race must still be to the swift and the battle to the strong. The healthy Individualism so earnestly championed by Mr. Spencer must be allowed free play. Open competition, as Darwin teaches, with its survival and multiplication of the fittest, must be allowed to decide the battle of life independently of a foolish benevolence that prefers the elaborate cultivation and multiplication of weeds to the growth of corn and roses. We are trustees for the countless generations of the future. If we are wise we shall trust to the great ruling truths that we assuredly know, rather than to the seductive claims of an alleged factor of evolution for which no satisfactory evidence can be produced.”

*The Barbarity of Circumcision as a Remedy for Congenital Abnormality.* By HERBERT SNOW, M.D. (Lond.), &c.; Surgeon to the Cancer Hospital. London: J. & A. Churchill. 1890. 8vo. Pp. 58.

THIS is practically a sweeping condemnation of the operation of circumcision—an attempt to “contribute, in some small measure, towards the abolition of an antiquated practice involving the infliction of very considerable suffering upon helpless infants.”

Dr. Snow considers, first of all, circumcision as a religious rite, in a brief historical sketch of its origin and significance, detaching from it all symbolic meaning, and putting it forth “divested of

the traditional sanctity which is possibly largely answerable for some of the views promulgated by medical authors." He discusses the opinions put forward in support of the practice under the heads of cleanliness, continence, diminished liability to venereal contagion, and to cancerous disease; and dismisses the three last as based on insufficient evidence, while the first is no sufficient reason for submitting a patient to "mutilation." We cannot agree with Dr. Snow on these points; nor do we think he has successfully combated the facts and figures put forward by the supporters of the operative treatment of phimosis. Special stress is laid on the risks attending the operation, and a very *ex-parte* statement is made as to the consequences which sometimes attend it. "Septic infection, hæmorrhage" [established only by one case from a family of "bleeders"], "and subsequent sloughing of the part, have to be sedulously guarded against; and on the Continent, at least, the resources of modern antiseptic surgery have been specially invoked." We are fortunate enough never to have seen any of these "grave risks" to which Dr. Snow refers; and, after considerable experience of the operation of circumcision, we have no hesitation in affirming that it is in every way a better and safer procedure, in cases that ought to be submitted to surgical interference at all, than either the method of dilatation or Furneaux Jordan's "nicking" operation—a half-hearted effort, which seems specially to commend itself to Dr. Snow.

*Lo Sperimentale.* Anno XLV. *Memorie Originale.* Fascicolo I. Firenze. 1891. Pp. 92.

OUR Florentine contemporary publishes occasionally fasciculi of original papers, and the first of these for the current year is now before us. It contains four memoirs—on chronic meningitis, on the afferent tracts of the spinal cord, on disinfection of surroundings infected with the virus of tetanus, and on the histogenesis of the thyroid gland. It is the third of these papers of which we propose to give a brief summary.

Dr. Luigi Bombicci has conducted a series of experiments in the pathological laboratory of the University of Bologna upon the effects of certain chemical and physical agents on the tetanic virus. The disinfectants examined were chlorine, sulphurous anhydride, milk of lime, commercial chloride of lime, and tar. After stating the results, often unsatisfactory and contradictory,

of previous investigations, he describes his own experiments in detail, and concludes from them—that an atmosphere saturated with *chlorine* destroys tetanic spores in fifteen minutes; that air, nearly or completely saturated with *sulphurous anhydride*, does not destroy the spores in twenty-four hours, but attenuates their pathogenic action, this effect beginning within an hour of exposure to the cause; that *white-wash* is altogether inert; that *commercial hypochlorite of calcium* in ten per cent. solution is a sure disinfectant for application to walls, but is powerless in five per cent. or weaker solutions; that a wash composed of ten parts “chloride of lime,” twenty-five caustic lime and 100 water is effective to whiten and disinfect walls, so far as tetanic virus is concerned; that *coal-tar* is a good disinfectant for application to wooden enclosures.

It is true that tetanus being rare—and in epidemic form very rare—special measures for the destruction of its virus will rarely be required; but it may fairly be inferred that the relative values of disinfectants are probably the same for other microbes than those to which Signor Bombicci's researches have been directed.

*Atlas of Clinical Medicine.* By BYROM BRAMWELL, M.D.; F.R.C.P., Edin.; F.R.S., Edin.; Assistant Physician to the Edinburgh Royal Infirmary; &c., &c. Vol. I. Part I. Edinburgh: Printed by T. & A. Constable at the University Press. 1891. Folio. Pp. 48.

IN the ranks of the medical profession there is no lack of earnest and indefatigable workers at the present day; but among the band of toilers, men like Jonathan Hutchinson, Benjamin Ward Richardson, and Byrom Bramwell stand out prominently as the sole authors of first-class medical periodicals. The “Illustrations of Clinical Surgery” and the “Archives of Surgery” of Hutchinson, the “Asclepiad” of Richardson, the “Studies in Clinical Medicine” and now the “Atlas of Clinical Medicine” of Byrom Bramwell are all astonishing examples of untiring industry and unflagging zeal on the part of their respective authors.

The work, of which the first instalment now lies before us, will consist of a series of coloured, black and white, and photogravure plates, measuring  $14\frac{1}{2}$  by  $10\frac{1}{2}$  inches, with a detailed description of the plates and text. It is anticipated that the complete Atlas will include at least ninety plates, and at least three yearly volumes, each of which will be complete in itself, and will cost original



subscribers a guinea and a half. Each yearly volume will contain thirty plates, and will be issued in four fasciculi. The first fasciculus of Volume I. appeared punctually on May 1, 1891, and the the subsequent fasciculi, or "Parts," are due on September 1, December 1, 1891, and March 1, 1892.

It is intended that each fasciculus shall contain at least 32 folio pages of letterpress, giving a detailed description of many of the diseases illustrated in the plates, and, whenever it is possible, a complete clinical history of the individual cases figured in the Atlas, as well as articles on clinical and systematic medicine, with wood-cut illustrations.

The first part, or fasciculus, contains 48 folio pages, equal to at least 144 octavo (ordinary book) pages. It is evident that neither trouble nor expense has been spared in the execution of the work, which reflects the greatest credit on author and publishers alike. The larger portion of this first fasciculus is devoted to the kindred subjects of Myxœdema and Sporadic Cretinism (Hilton-Fagge), which latter affection, the author states, is really the infantile form of myxœdema. The symptoms of myxœdema and of exophthalmic goitre are contrasted in a short section occupying pages 26 and 27, and the remainder of the fasciculus is taken up with a full and illustrated clinical and pathological account of Friedreich's ataxia.

The fasciculus before us is rich in illustrations. First come three highly artistic coloured portraits of myxœdema. These are followed by two plates in black and white, consisting of seven figures representing sporadic cretinism, or infantile myxœdema. With this part, also, are issued a photogravure plate showing lymphadenoma in a man, and a tinted crayon representing "melancholia with fear." These are numbered respectively "Plate VIII." and "Plate XXVI.," so they are published in advance, presumably to demonstrate the character of the whole work.

There are singularly few misprints, printers' errors, and misspellings; but "*Wockenschrift*," "Burdack," and "Argyle-Robertson" need correction. This last mis-spelling is especially strange in a work written by an Edinburgh physician, and printed in the Scottish capital.

We congratulate Dr. Byrom Bramwell on the classical tone of this instalment and earnest of his new work, and we trust that he will be granted health and strength to bring it to a successful termination.

*The Daughter: her Health, Education, and Wedlock. Homely Suggestions for Mothers and Daughters.* By WILLIAM M. CAPP, M.D. Philadelphia and London: F. A. Davis. 1891. Pp. 144.

TURNING over the leaves of this little book, we came upon a paragraph of such preposterous absurdity that "we read no more that day." On page 49 we are informed that "no attempt need be made to teach the letters of the alphabet until the child is about nine years of age"; and that "it is a fact repeatedly demonstrated that children then first taught their letters under experienced teachers at twelve years rank the same as others of the same age who began attending school at the age of six." Undeterred by this nonsense, we, after some natural hesitation, took up "The Daughter" again and read it through. Having done so, we recommend it to mothers. Dr. Capp's professed "aim is to enable the mother to second more intelligently the efforts of the medical adviser when he comes professionally into the family, and to offer some practical considerations affecting woman in her family relation." On the whole, the attempt is successful and the work is useful. Occasionally we find a passage which we should like to blot—as where the use of stimulants is discouraged on the ground that they cause the heart to beat faster, and so waste some of our pre-established total of pulsations; but such eccentricities are comparatively few. We approve specially of the remarks on the duty of mothers to explain, as delicately as they alone can, to their maturing daughters matters connected with the reproductive system which it is too commonly the custom to leave to be discovered by more questionable and objectionable means.

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*Clinical Manual for India, compiled for the use of the Students of the Madras Medical College.* By DEP. SURG.-GEN. C. SIBTHORPE, F.K.Q.C.P., M.R.I.A.; Fellow of the University of Madras. Third Edition. Madras: Higginbotham & Co. 1890. 8vo. Pp. 420.

THE fact that this is a third edition speaks sufficiently for the merit of this Manual. The work has been considerably enlarged without becoming unwieldy, and Mr. Sibthorpe obtained the co-operation of experts in preparing special Sections. Of the usefulness of the Clinical Manual in India we have abundant

evidence; and we have no doubt that our own students, and of our practitioners not a few, would find a copy of the work most convenient for reference. The arrangement of subjects is excellent, and a copious index is supplied.

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*A Laboratory Course of Pharmacy and Materia Medica.* By WILLIAM ELBORNE. London: C. Griffin & Co. 1890.

MR. ELBORNE is a teacher who has had considerable experience in Owens College and elsewhere, and he has now published an excellent volume, which may be used in conjunction with any of the existing text-books on *Materia Medica* and *Pharmacy*.

A student who has gone through the course laid down by Mr. Elborne could not fail to acquire an extensive knowledge of practical pharmacy and of dispensing.

The book is well arranged and clearly written, and we can warmly recommend it for adoption by teachers and students of practical pharmacy.

The main portion of the text is distributed under three headings:—

Part I. treats of Chemical Pharmacy. It is concise and to the point, and the practical laboratory work is arranged under 10 types, illustrating the more important processes.

Under Galenical Pharmacy, Part II., are considered the processes and manipulations by which the crude vegetable and animal substances are prepared for medicinal use.

In Part III. we have a capital course of Practical Dispensing laid down.

Autograph prescriptions are given, rendered into full Latin, and translated into English. Then follow practical observations and notes upon dispensing, incompatibility, &c., embodying a very considerable amount of information.

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#### CREASOTE HYPODERMICALLY.

M. JOISSENE recommends the following prescription for the hypodermic use of creasote:—Oil of sweet almonds, 120 grammes; pure creasote, 8 grammes.—Mix. 20 to 40 grammes of this solution to be injected into the lumbar region. Twenty-four hours should be allowed to intervene between each injection. He has not found it produce any kidney trouble.—*Bulletin Médicale.*

## PART III.

### SPECIAL REPORTS.

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#### REPORT ON MIDWIFERY AND GYNÆCOLOGY.

By ANDREW J. HORNE, Fellow and Examiner in Midwifery, Royal College of Physicians of Ireland; ex-Assistant-Physician to the Rotunda Hospital, Dublin.

#### CÆSAREAN SECTION AND THE BEST MATERIAL OF UTERINE SUTURE.

MUNCHMEYER (*Arch. für Gynäkologie*, Band 37, Heft 2) reports three cases of Cæsarean section performed according to Säger's method, making the record of the Dresden clinic twenty-eight Cæsarean sections with three maternal deaths and one foetal death. He also adds seven cases of amputation of the uterus, with the removal of the foetus, performed for septic infection; for uterine tetanus; for threatened hæmorrhage after incision of the uterus and the extraction of the foetus, caused by occluded cervix with contracted pelvis; for highly contracted pelvis, death of the foetus, albuminuria and beginning septic infection, and two cases of highly contracted pelvis, with failure of the uterus to contract after incision, and a case of cancer of the cervix, which had extended so far as to render amputation necessary. All of the mothers in these seven cases recovered, and two of the children survived.

M. has had the opportunity of examining, *post mortem*, two uteri on which the Cæsarean section had been performed. The patients had survived several months, and died by some intercurrent disease. Microscopic examination of the chromic acid catgut sutures employed found them holding the parts firmly in good apposition, and the suture material itself undissolved, and resembling in firmness silver wire. The silk suture, however, which had been used to close the abdominal wall had been partly absorbed. It is Manchmeyer's opinion that chromic acid catgut is the best suture for the uterus, and silk the best for the abdominal wall.

Ahlfeld (*Centralblatt für Gynäkologie*, No. 30, 1890,) states that he has induced labour in 118 cases, from whose study he draws the



following conclusions:—The results of the induction of labour compare most favourably with those of Cæsarean section—80 per cent. of 111 cases leaving the hospital in good health. In 101 children born in contracted pelvis, 60 per cent. were discharged in good health.

The method of introducing a bougie is best adapted to private and hospital practice. Labour should be induced as late as possible, and the smallest true conjugate which justifies the operation.

#### ON THE TREATMENT OF BREECH PRESENTATIONS.

Winter (*Deutsche Medicinische Wochenschrift*, February, 1891) contrasts the different line of treatment to be adopted in breech and foot presentations, and the more favourable prognosis offered by the former variety. Expectancy is the attitude to be adopted in footing cases, but interference is necessary if in breech presentations delay becomes dangerous to mother or child. The indications for bringing down a foot in breech cases and completing delivery are complications endangering the life of mother or child, such as slowing of pulsation in the cord, impending asphyxia, hæmorrhage, septicæmia, &c. In prolapse of the cord, eclampsia and contracted pelvis, this method of procedure may also have to be adopted. The writer quotes the opinions of various authors as to the particular form of contracted pelvis in which the operation can be performed with beneficial results. He considers that in normal conditions it is wrong, because it is unnecessary, and while not entirely harmless for the mother may be very detrimental to the child. In eighteen cases where delivery speedily followed drawing down of the foot, seventeen of the children survived, while in nine cases, where delivery was more tediously accomplished, four of the children were lost.

The writer advocates bringing down a foot in preference to traction with the fingers, loop or blunt hook, all of which are either tedious or dangerous. If these were so safe an instrument for the breech as forceps for the head, there would be no necessity for bringing down the feet. All the breech forceps invented have been failures.

If the foot cannot be brought down, the author recommends traction with the finger, inserted between the thigh and abdomen of the child, and if this be unsuccessful, a skein of worsted or silk may be employed; but this is often difficult or impossible of application. Poppel advocates introducing it by means of a Bellocq's

sound. Winter strongly recommends an instrument invented by Bunge, and called a "loop carrier." It consists of a curved metal staff, grooved on its concave surface, and containing a thick hempen cord covered with gutta-percha, and about eighteen inches long. The latter is passed by means of the staff between the thighs and abdomen of the child, the staff is withdrawn, and the loop can then be used as a tractor.

His conclusions are :—(1.) Normal cases to be treated by the expectant method. (2.) Bring down a foot in cases of prolapse of the cord, eclampsia and contracted pelvis, but not, as a rule, before the os is well dilated. (3.) Complete the labour in breech cases where desirable by bringing down a foot, and proceed at once to extraction of the child. If the breech is too low in the pelvis for this operation, use the finger as a tractor, and should this prove unsuccessful, employ Bunge's instrument or a skein of wool.

#### THE VAGINAL OPERATION IN EXTRA-UTERINE PREGNANCY.

Fenger (*American Journal of Obstetrics*, April, 1891). The writer begins by giving the history of a case in which he was called upon to operate.

He then reviews at some length the question of the indications for, and the advisableness of, the vaginal operation in extra-uterine pregnancy, and its relation to laparotomy for the same condition. First, the anatomical condition calling for, or making possible, the vaginal operation.

The vaginal operation is to be considered only when the sac or foetus is located so deeply in the recto-uterine fossa that it pushes the walls of this region downward, so as to form a prominent tumour in the posterior wall of the vagina.

He then quotes Hecker (Bandl) as having found the foetus expelled through the rectum in 28 out of 132—that is, in 20 per cent. of extra-uterine pregnancies. This frequency, however, does not indicate that the sac was always situated deep down in Douglas' fossa, as the opening into the intestinal canal might be located high up above the rectum in almost every part of the tract.

The writer then enters into the "Dangers of the Operation," and sums up with the following conclusions :—

1. In cases where the foetal cavity is still aseptic, the vaginal operation exposes the patient to the danger of sepsis in the foetal sac, which cannot be guarded against. Abdominal section gives far better means of protection against septic infection.

2. Hæmorrhage from the placenta cannot be controlled by the vaginal method.

3. Delivery of the child at full time is usually difficult, and thus dangerous to the mother, by the vaginal operation, but easy by the abdominal.

4. If the fate of the child is to be considered, the vaginal operation must be abandoned.

5. Where suppuration has set in, in an extra-uterine pregnancy presenting low down in the pelvis, and the placental circulation has ceased, the vaginal operation may be considered in comparison with the abdominal.

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#### EFFERVESCING POWDER AS A HYPNOTIC.

IN the November number of the *Archivio Italiano per le malattie nervose* gives an account of some observations made in the lunatic asylum of Ferrara on the effects of the effervescing mixture of sodium bicarbonate and tartaric acid. 124 observations were made on 40 patients suffering from insomnia due to various morbid conditions. He found that the mixture exhibited in the evening produced a decided hypnotic effect. Half of the patients, however restless and however unfavourably situated for sleep, slept within half an hour of administration, most of the remainder within an hour, few at a later period. The sleep produced was calm and not profound, natural, and lasting from 5 to 8 hours. The usual dose was 6 grains of the mixed powders, exceptionally increased as far as 12. Young people were found to be more susceptible to the influence of the remedy than adults or the old. The effect is attributed to the absorption of carbonic acid and its well-known anæsthetic action.

#### MEDICAL EDUCATION OF WOMEN IN EDINBURGH.

THE Scottish Association for the Medical Education of Women has published its first Report, and from it we learn the medical ladies in the modern Athens do not agree like "birds in their little nests." The Edinburgh School of Medicine for Women was founded in 1879, but is not, the Association considers, "conducted on sound and catholic principles," nor has it been "truly an open and public establishment." Fresh efforts were necessary, and this Association was constituted in January, 1890. At first great difficulty was experienced in obtaining clinical teaching for the students attached to the new school, the older one having secured a monopoly, which it refused to share, of the Leith Infirmary. This difficulty has been overcome, the Royal Infirmary having been opened to lady students. Twenty-eight students are now upon the rolls of the College, of whom ten obtain clinical instruction in Glasgow.

## PART IV.

### MEDICAL MISCELLANY.

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*Reports, Transactions, and Scientific Intelligence.*

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#### ROYAL ACADEMY OF MEDICINE IN IRELAND.

President—SAMUEL GORDON, M.D., F.R.C.P.I.

General Secretary—W. THOMSON, M.D.

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#### SECTION OF OBSTETRICS.

President—S. R. MASON, M.B., F.R.C.S.I.

Sectional Secretary—ANDREW J. HORNE, F.R.C.P.I.

*Friday, March 13, 1891.*

The PRESIDENT in the Chair.

#### *Subperitoneal Myoma of the Uterus.*

MR. O'CALLAGHAN exhibited a subperitoneal myoma of the uterus, removed from a patient, aged thirty-five. Hæmorrhage was easily controlled by deep stitches; the edges of the capsule were turned in and united by an uninterrupted suture, a Köberle's drain was introduced, and patient made a perfect recovery. Mr. O'Callaghan showed a fibro-cystic tumour of uterus, which weighed twenty-four pounds. In this case, after progressing favourably for five days, complete obstruction of the bowel took place, owing to constriction of the colon by dragging of the pedicle. Re-opened wound and performed a median-colotomy, but patient sank soon after. Mr. O'Callaghan also exhibited submucous fibroid of uterus. After dilating the uterus with Tait's dilators, made incision around base of fibroid, and enucleated it successfully. Good recovery.

#### *Account of a New Form of Uterine Support, or Roller Pessary.*

DR. MORE MADDEN said the difficulty of ensuring the retention *in situ* of any of the ordinary forms of uterine pessary commonly employed is one of the most frequent troubles met with in gynæcological practice. With the view of obviating this difficulty, he has recently suggested to Messrs. Arnold, of London, the idea which they have very satisfactorily



carried out in the Roller Pessary which he now exhibited. The advantages claimed for this instrument are—first, greater facility of introduction, which in the roller pessary is favoured by the rotation of the upper arm of the support; secondly, greater certainty of filling the post-cervical *cul-de-sac*, and so overcoming the tendency of the displaced organ, whether it be the uterus or the ovary, to descent therein; thirdly, the obviation of the constant pressure occasioned by the ordinarily-used pessary; and fourthly, the circumstance that the new support affords no fixed point or shelf for the deposit of discharges or septic matter. Moreover, there is another,



DR. MORE MADDEN'S NEW ROLLER PESSARY.

and, as he believed, a still more important advantage connected with the rotatory movement of the upper arm of this instrument—namely, a greatly diminished risk of the pessary slipping out of its place. In nine cases out of ten that accident results from the expulsive efforts of the patient to dislodge a mass of hardened faeces from the upper rectum. Such a displacement of the roller pessary is prevented by the rotatory action of its upper arm, by which the support is made to travel slightly upwards, instead of being forced downwards, as in other pessaries, by the faecal pressure through the recto-vaginal walls. The instrument in question is applicable in all cases of posterior displacements of the uterus, and also in those less generally recognised, but not less important, instances of ovarian prolapse into Douglas's fossa.

#### *New Instrument for Intra-Uterine Work.*

DR. MORE MADDEN also exhibited a new instrument for intra-uterine work, combining the action of the ordinary curette with that of a tenaculum. In this instrument the desired action, either as a curette or as a tenaculum, can be exactly and easily regulated and directed from without by a peculiar form of screw adjustment worked from the handle.

#### *Endo-Uterine Therapeutics.*

DR. MORE MADDEN read a paper on the above subject. With regard to the methods of modern intra-uterine treatment and the conditions by which this is called for, the writer's observations are founded on a clinical experience extending over many years, and embracing upwards of ten thousand gynaecological cases treated in his wards or in the extern department of the Mater Misericordiae Hospital, Dublin. Of the cases admitted

into those wards during the last fifteen years, endo-uterine treatment was found necessary in 35 per cent. The two essential points in all such treatment are—first, that the orifice and cavity of the uterus, if not already sufficiently dilated, should be mechanically expanded; and secondly, that whatever application is resorted to should be brought into direct contact with the diseased endometrium. For the first purpose the slow, painful, and hazardous methods of dilatation by sponge or laminaria tents have been long abandoned by Dr. More Madden, who employs in their stead the rapid cervical dilator which Messrs. Arnold have brought out in accordance with his suggestion, and which he finds more effective and quicker in its action than Hegar's or other similar dilators. The second object is especially necessary as a preliminary to endo-uterine treatment in cases of congestive hypertrophy and chronic subinvolution, in which the lining membrane of the uterus is commonly overlaid by an impervious pseudo-membranous albuminoid neoplasm evolved from the proliferating cilia of the diseased surface. Or else the endometrium, in many cases, is so thickly bathed in the tenacious morbid secretion therefrom, as effectually to protect the underlining tissues from the action of any remedial agent introduced into the uterine cavity until that pseudo-membrane and secretion are removed by the curette. For these objects Dr. More Madden recommends, firstly, the use of Duke's cervical curette to cleanse out the entrance to the womb; and secondly, the employment of his own "Adjustable Uterine Curette," by which the endometrium may be thoroughly denuded, and at the same time by the hæmorrhagic discharge thus occasioned the congestion of the hyperæmic and hypertrophied organ may be most effectually relieved.

In the treatment of subinvolution the writer advocates the introduction, in some instances, of a small tampon saturated in a combination of tannic acid and turpentine, which he terms "Tanno-terebinth." This acts as an immediate stimulant and astringent on the uterine structures, and in suitable cases is allowed to remain in the cavity from 12 to 24 hours, unless sooner expelled from the then generally much contracted uterus. The vaginal glycerine-saturated tampon commonly employed in cases of this kind, although unquestionably serviceable in many instances, is messy and troublesome in its use both to patient and practitioner, and hence for some time past the writer has generally adopted the boric acid, or "dry treatment," recommended recently by Mr. Duke, and which he has found generally very satisfactory as a substitute for the older method of treatment. He also strongly deprecates the employment of the ordinary siphon syringe for any endo-uterine purpose, and believes that this should be replaced by an irrigator such as the one he suggested many years ago, and which, having been since appropriated by others, without any acknowledgment is depicted in the paper of which this is an abstract. The foregoing measures must, however, be supplemented by

more active agents in those more serious cases of long standing, fundal or corporeal endometritis and subinvolution, in which the disintegrated and eroded endo-uterine mucous membrane becomes the seat of various pathological changes, extending to the submucous structures and utricular glands, and often associated with those so-called fungosities resembling papillary epithelioma, which, if unchecked, may ultimately degenerate into that condition. In such cases it is that the cautery, actual or potential—the first in the form of igni-puncture, and the latter in the shape of the stronger caustics, acid, nitrate of mercury, fuming nitric acid, or chromic acid, &c.—may be justifiably resorted to in endo-uterine treatment. In conclusion, Dr. More Madden briefly details the result of his clinical experience of these various applications, the circumstances that indicate their use, the dangers that may attend their abuse, and the methods of their employment.

After some remarks from DR. LOMBE ATTHILL,

The PRESIDENT thought, in selecting dilators for use, the amount of dilatation required should be considered. In some cases it is only necessary to dilate to a small amount to admit a curette; in other cases a large amount of dilatation is required to admit the finger to explore the uterus. He wished to know in what cases of chronic intra-uterine disease Dr. Madden recommended intra-uterine douching with hot water. After labour or abortion, or operations on the interior of the uterus, it is frequently done, but in these cases the cervical canal is patulous. In chronic cases the cervix should be kept in a state of sufficient dilatation to admit a Boscman's catheter, if intra-uterine douching were carried out daily, as recommended by Dr. More Madden. As to the use of caustic, the most important point was to apply the caustic directly to the mucous membrane, which is frequently very difficult on account of the mucous secretion filling the uterus and cervical canal.

DR. MORE MADDEN, in reply, expressed his satisfaction that one of the chief objects of his paper had been attained by the very valuable observations which Dr. Atthill and the President had contributed to this discussion. With many of their views he entirely coincided, and on other points on which, although he could not fully agree with a few of their opinions, he thought their views entitled to much consideration. Having, however, already taken up so much of the time of the Section, Dr. More Madden would not venture to trespass further on their patience by any additional remarks on the subjects just referred to.

## SECTION OF ANATOMY AND PHYSIOLOGY.

President—PROF. J. M. PURSER, M.D., F.R.C.P.I.

Sectional Secretary—A. BIRMINGHAM, M.B.

*Friday, March 20, 1891.*

The PRESIDENT in the Chair.

*Exhibits.*

1. DR. W. H. THOMPSON showed a skull in which the superior semicircular canals were exposed. He also showed some specimens illustrating the anatomy of the middle and internal ears, and remarked upon the inaccurate description of these parts found in some text-books. Prof. Birmingham agreed with Dr. Thompson's remarks as to the position of the semicircular canals, and pointed out some other relations of the part frequently described inaccurately.

2. PROF. BIRMINGHAM exhibited a malformed skull with an enormous foramen magnum ( $2\frac{1}{2}$  inches diameter), the cervical vertebral with incomplete neural arches, and several other peculiarities.

The PRESIDENT and PROF. CUNNINGHAM made some remarks on the rarity of the specimen; they considered that the incomplete cervical canal was a case of spina bifida.

PROF. BIRMINGHAM, in replying, thought it probable that the large foramen magnum might be accounted for by an extension of the spina bifida into the first modified vertebra of the skull—adopting the vertebrate theory of the skull.

*Reports of Collective Investigations in the Anatomical Departments of Trinity College and the Catholic University Medical School.*

I. *Distance of the Lower Border of the Kidney from the Iliac Crest.* Reported by (a) W. H. THOMPSON, F.R.C.S. Eng.—Fifty-three subjects were examined, 26 of whom were males, while 27 were females.

*In the males* the mean distance on the right side was 32 mm., while on the left side the distance was 40 mm.

*In the females* the average distance on the right side was 27 mm., that on the left being 30 mm.

In six males the right kidney was at a higher level than the left, in two on the same level. In seven females the right kidney was the higher, while in three both kidneys were at the same level.

In females the kidneys were at a somewhat lower level than in males, this being more apparent on the right side. Thus, 8 of the 27 female kidneys on the right side, and 5 on the left, were either as low as or



below the crest, compared with 2 right and no left kidneys in the males as low as the crest, neither of the 2 right kidneys was below the crest.

The mean distance from the mid-dorsal line to the centre of the lower border of the kidney was  $7\frac{1}{4}$  cm. on the right side in males and 7 on the left. The measurement in females was 7 cm. on both sides.

(b) J. H. M'GEE (Melbourne).—Seventeen subjects were examined—7 males, 10 females. The average distance of the kidney from the ilium was—*In the male*, right side,  $1\frac{1}{4}$  inches; left side,  $1\frac{1}{2}$  inches. *In the female*, right side,  $1\frac{1}{2}$  inches; left side,  $1\frac{3}{5}$  inches. In the males one right kidney was found overlapping the crest and a left touching it. In the females three were overlapping on the right side, one on the left. On the left side of one female the kidney was atrophied and high up in the hypochondrium.

II. *Formation of the Thyroid Axis.* Reported by (a) J. J. LONG, B.A.—Seventy-five arteries were examined. In 33 of these the artery was normal.

In 22 cases the posterior scapular arose separately from the third stage of the subclavian.

In 21 cases an artery (*transversalis cervicis*), furnishing both posterior scapular and superficial cervical, arose from the third stage of the subclavian. In 4 instances a trunk giving off posterior scapular, superficial cervical, and supra-scapular, arose from the third stage of the subclavian.

(b) P. BRADY and J. DUNNE.—Forty-five parts were examined. *The inferior thyroid* arose from thyroid axis in 41, with transverse cervical from thyroid axis in 4. *The ascending cervical* arose from inferior thyroid in 40, from transverse cervical in 5. *The transverse cervical* arose from thyroid axis and divided into superficial, cervical, and posterior scapular in 36; it arose from thyroid axis, with inferior thyroid and divided, in 4; arose from axis, and was continued as superficial cervical in 5. *Superficial cervical* arose from transverse cervical 40 times, from thyroid axis direct 5 times. *Posterior scapular* arose from transverse cervical 40 times, from 3rd stage of the subclavian 5 times on right side. *Supra-scapular* arose from thyroid axis 40 times, from 1st stage of the subclavian 5 on right.

III. *The Distribution of the Last Dorsal and First Lumbar Nerves.* Reported by MONTAGUE GRIFFIN, B.A.—Fifty subjects were examined, yielding most interesting results, which could not be done justice to in a short report.

IV. *The Occurrence of Meckel's Diverticulum Ilei.* Reported by (a) HUGH HUNTER, B.A.—Sixty-two subjects were examined. In one (a male) the diverticulum was found. Its distance was 49 inches from the ileo-cæcal valve, and it sprang from near the mesenteric attachment of the bowel. It, with a good length of the ileum, formed part of the contents

of a large femoral hernia. It hung quite free and had no connection other than its root.

(b) A. J. M. BLANEY, B.A.—Twenty-eight subjects were examined; no trace of a diverticulum was found.

V. *Distribution of Cutaneous Nerves on the Dorsum of the Foot and Toes.* Reported by (a) F. A. DIXON, B.A.—Fifty-four feet were examined. The nerve-supply was furnished in two chief ways.

*In the first* the musculo-cutaneous supplied the inner side of the great toe and both sides of the four clefts, thus leaving the outer side of the little toe to be supplied by the external saphenous nerve. The branch to the innermost cleft usually communicated with the internal terminal branch of the anterior tibial nerve, but this latter supplied merely the skin of the web at the root of the cleft.

*In the second* the musculo-cutaneous supplied the inner side of the great toe and the two inner clefts, the other two clefts, as well as the outside of the little toe, being supplied by the external saphenous. The branch of the anterior tibial to the inner cleft corresponded in distribution and connections to that in the first variety.

(b) J. M. REDINGTON.—Twenty-eight feet were examined. *The inner side 1st toe* was supplied by musculo-cutaneous in 17, by anterior tibial 9, by both conjoined in the remaining 2. *Outer side of 1st toe* by anterior tibial 21, musculo-cutaneous in 1, both conjoined in 6. *Inner side 2nd toe*, anterior tibial 19, musculo-cutaneous 1, both conjoined 8. *Outer side 2nd toe*, musculo-cutaneous 19, anterior tibial 6, both conjoined 3. *Inner side 3rd toe*, musculo-cutaneous 25, tibial 2, both conjoined 1. *Outer side 3rd toe*, musculo-cutaneous 23, external saphenous 4, both conjoined 1. *Inner side 4th toe*, musculo-cutaneous 23, saphenous 4, both conjoined 1. *Outer side 4th toe*, musculo-cutaneous 24, saphenous 5, both conjoined 1. *Inner side 5th toe*, musculo-cutaneous 19, saphenous 7, both conjoined 2. *Outer side 5th toe*, saphenous 24, musculo-cutaneous and saphenous 4.

## 2. *Variability of the Level of Attachment of the Lower Limb to the Vertebral Axis in Man.*

PROFESSOR BIRMINGHAM read a paper on the above subject. He referred to Paterson's investigations on the position of the limb in different mammals, and to Rosenberg's theory of the headward shifting of the sacrum and consequent shortening of the movable portion of the vertebral column. Rosenberg advanced the view that the vertebral column in man had in its primitive form 25 movable vertebræ in front of the sacrum, the present form has 24, and the future form will have 23. In the same paper he describes a separate cartilaginous rudiment of a rib in the 1st lumbar transverse process of the embryo, which disappears by fusing with the transverse process at a later period. Professor Birming-

ham sought for examples of either the ancient or the future form of vertebral column as described by Rosenberg, and in less than 50 subjects he found two examples of the former, none of the latter. In each of these specimens the sacrum was developed one segment further back than normal. In each the cervical vertebræ were 7 in number, the dorsal 12, and the lumbar 6, the sacral 5, the coccygeal 3. That this condition was due to a shifting of the sacrum backwards was shown by the nerves. The last nerve which normally contributes to the lower limb (lumbo-sacral) plexus is the 3rd sacral or *nervus bigeminus*. This is an easily-recognised nerve; it divides into two parts—one goes to the sacral, the other to the pudic plexus; it normally comes out beneath the 3rd sacral vertebra, conversely the vertebra beneath which it comes is the true 3rd sacral. In both specimens referred to above, the *nervus bigeminus* came out beneath the 2nd piece of the sacrum, consequently the 2nd piece of the sacrum in these cases is the true 3rd sacral vertebra. In similar fashion the coccygeal nerve came out beneath the last piece of the sacrum. The relations of both these nerves show that the sacrum has been developed one segment further back than normal. Besides, in one of the specimens there were two well-developed lumbar ribs, connected to the pedicle and transverse process of the 1st lumbar vertebra; in the other case, on one side only was a lumbar rib present. Here, then, is the ancient type of vertebral column with 25 movable vertebræ, and here also the 13th rib, which has been suppressed owing to the advance of the lower limb, appears again, reproducing the condition of this part of the column and of the ribs found in the gibbon.

The Section then adjourned.

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## SECTION OF PATHOLOGY.

President—E. H. BENNETT, M.D.

Sectional Secretary—J. B. STORY, F.R.C.S.I.

*Friday, April 3, 1891.*

The PRESIDENT in the Chair.

### *Cirrhosis of Lung.*

DR. FINNY read a paper upon cirrhosis of the lung.

The PRESIDENT, DRs. BEWLEY and BEATTY spoke, and DR. FINNY replied.

### *Histology of Tubercular Tissues after treatment with Koch's Tuberculin.*

DR. M'WEENEY read a paper on this subject. [It will be found at page 468.]

The PRESIDENT and MR. STORY discussed the communication, and

DR. M'WEENEY replied that, with regard to the Chairman's remarks, he would not like to draw any positive conclusion as to the action of the lymph on the tubercular tissue when the greatest authorities had declined to do so as yet. But he would say that, on the whole, no changes were found which were not met with in a similar case that had not received the Koch treatment. While thanking Mr. Story for the kindness of his remarks, he regretted that, owing to the "reaction" against the Koch treatment, both among patients and surgeons, it would be impossible for him to procure pieces of Koch-treated lupus tissue, for the present at least.

### *Case of Syringo-myelia.*

DR. O'CARROLL read a communication on a case of syringo-myelia. A man aged thirty-two, a telegraph clerk, had worked at his business for two years and a half, during which he had suffered from a progressive spastic paralysis. He then came to Dublin for treatment, being able to walk a mile and a half to the local railway station. In Dublin he in some way lost his way, was picked up and brought to hospital by the police, and was found on admission to have a stammering speech, an imbecile manner, and to be almost completely paraplegic. He ran through a series of symptoms during the succeeding ten days, which included incontinence of urine and fæces, the rapid formation of bullæ and bedsores, and an immediately *ante-mortem* temperature of 108.2°. *Post-mortem* there were sero-sanguineous patches in the pia mater, the brain seemed normal, the central canal of the cord was dilated, for about four inches in the lower dorsal and upper lumbar regions. The dilatation was in the central canal; sections showing the epithelial lining around the canal, with breaks in its continuity such as might be accounted for by rapid dilatation of the tube. The original disease from which the patient suffered could only be guessed at from the symptoms as detailed by the patient's sister; that from which he suffered in hospital seemed to be a myelitis, which turned out to be associated with effusion into the ventricle of the cord.

DRS. FINNY and BEWLEY spoke on the case.

DR. M'WEENEY drew attention to Schulze's view that the usual method of formation of syringo-myelia was the break-down of a gliomatous tumour which had undergone mucoid degeneration. Cavities thus formed usually lay outside and behind the central canal. The case laid before the Academy by Dr. O'Carroll was of the extremest interest on account of the cavity being really a dilatation of the central canal, as was proved by the microscopic slides, in which the cavity was seen to be surrounded by columnar ciliated epithelium. Dr. M'Weeney drew attention to the case reported by von Recklinghausen and Holschewnikoff, in which the



cavity extended from the level of the 2nd cervical to the 4th dorsal vertebra, and in which symptoms not unlike progressive muscular atrophy were found. He thought that the case reported by these observers threw considerable light on that so ably brought forward by Dr. O'Carroll.

#### *Septic Phlebitis.*

MR. TOBIN gave particulars of a case of septic phlebitis treated by him in St. Vincent's Hospital. The disease was secondary to the removal of portions of varicose veins, and originated not in the operation wounds but in a small ulcer near the ankle. On the 9th day after operation symptoms of acute septic phlebitis were fully developed. The patient had had two marked rigors; temp. 105°. All the superficial veins on inside of leg and three inches of long saphenous vein were engaged. Mr. Tobin reflected the skin from the affected parts and removed every diseased vein following each till an apparently sound point had been reached. The subsequent history was satisfactory. The wound healed rapidly. No further rigor occurred. Severe constitutional disturbance, indicating that secondary centres of infection had formed during the delayed interference, continued, and it was not till a month after the operation that the patient's temperature was normal, and his condition in every way satisfactory. Remarking on this case, Mr. Tobin said that surgeons had not taken sufficiently to heart Ogston's teachings as to "micrococcus poisoning;" and in consequence of looking on infective processes as diseases of the blood, they held back from operating on cases that were not beyond rescue.

DR. M'WEENEY drew attention to the fact that the latest researches, notably those of Rosenbach, went to show that the staphylococcus pyogenes aureus and albus grew equally well whether exposed to the air or not. The smallness of the abscesses in the lung might be accounted for by the fact that they had started from a single coccus.

MR. TOBIN replied.

#### *Subconjunctival Lipoma.*

MR. STORY exhibited microscopic sections of a subconjunctival lipoma, which grew between the superior and external rectus—the usual situation for such growths.

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#### CARDIAC OSSIFICATION.

IN a letter to the editor of the *Times and Register*, October 25th, 1890, Dr. Reading writes of a *post mortem* :—"I found the left auricle encircled on the inner surface by a ring of ossification, three-fourths of an inch wide, and extending almost the entire distance round it."

# SANITARY AND METEOROLOGICAL NOTES.

Compiled by J. W. MOORE, B.A., M.D., Univ. Dubl.; F.R.C.P.I.;  
F. R. Met. Soc.; Diplömte in State Medicine and ex-Sch. Trin. Coll. Dubl.

## VITAL STATISTICS

*For four Weeks ending Saturday, April 25, 1891.*

The deaths registered in each of the four weeks in the sixteen principal Town Districts of Ireland, alphabetically arranged, corresponded to the following annual rates per 1,000:—

| Towns     | Weeks ending |           |           |           | Towns       | Weeks ending |           |           |           |
|-----------|--------------|-----------|-----------|-----------|-------------|--------------|-----------|-----------|-----------|
|           | April 4.     | April 11. | April 18. | April 25. |             | April 4.     | April 11. | April 18. | April 25. |
| Armagh -  | 25·8         | 36·1      | 25·8      | 10·3      | Limerick -  | 16·2         | 24·3      | 25·6      | 22·9      |
| Belfast - | 29·1         | 25·1      | 31·3      | 24·9      | Lisburn -   | 19·3         | 9·7       | 9·7       | 29·0      |
| Cork -    | 29·9         | 24·0      | 28·6      | 16·2      | Londonderry | 28·5         | 32·1      | 17·8      | 16·0      |
| Drogheda  | 33·8         | 8·5       | 16·9      | 33·8      | Lurgan -    | 20·5         | 35·9      | 41·0      | 25·7      |
| Dublin -  | 22·7         | 29·8      | 26·6      | 22·6      | Newry -     | 14·0         | 24·6      | 17·6      | 21·1      |
| Dundalk - | 21·8         | 17·5      | 4·4       | 21·8      | Sligo -     | 14·4         | 48·1      | 14·4      | 24·1      |
| Galway -  | 33·6         | 30·3      | 50·4      | 20·2      | Waterford - | 57·9         | 25·5      | 41·7      | 32·4      |
| Kilkenny  | 16·9         | 21·1      | 21·1      | 21·1      | Wexford -   | 25·7         | 12·8      | 25·7      | 4·3       |

In the week ending Saturday, April 4, 1891, the mortality in twenty-eight large English towns, including London (in which the rate was 20·9), was equal to an average annual death-rate of 22·4 per 1,000 persons living. The average rate for eight principal towns of Scotland was 26·2 per 1,000. In Glasgow the rate was 30·1, and in Edinburgh it was 23·8.

The average annual death-rate represented by the deaths registered during the week in the sixteen principal town districts of Ireland was 25·9 per 1,000 of the population.

The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 1·6 per 1,000, the rates varying from 0·0 in eight of the districts to 16·2 in Waterford—the 25 deaths from all causes registered in that district comprising 4 from whooping-cough and 3 from diarrhœa. Among the 131 deaths from all causes registered in Belfast are 2 from scarlatina, 1 from whooping-cough, 3 from enteric

fever, and 3 from diarrhœa. The 5 deaths in Armagh comprise 2 from whooping-cough.

In the Dublin Registration District the registered births amounted to 191—92 boys and 99 girls; and the registered deaths to 162—80 males and 82 females.

The deaths, which are 53 below the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 23·9 in every 1,000 of the estimated population. Omitting the deaths (numbering 8) of persons admitted into public institutions from localities outside the district, the rate was 22·7 per 1,000. During the first thirteen weeks of the current year the death-rate averaged 30·2, and was 2·6 under the mean rate in the corresponding period of the ten years 1881—1890.

Twelve deaths from zymotic diseases were registered, being 2 over the low number for the preceding week, but 11 under the average for the 13th week of the last ten years. They comprise 1 from influenza (complicated with pneumonia), 3 from whooping-cough, 1 from enteric fever, and 1 from dysentery.

Only 8 cases of enteric fever were admitted to hospital, being 5 under the number of admissions for the preceding week; 8 enteric fever patients were discharged, 1 died, and 53 remained under treatment on Saturday, being 1 under the number in hospital on Saturday, March 28.

The hospital admissions include, also, 3 case of measles, but no cases of scarlatina or of typhus were received. Six cases of measles, 1 case of scarlatina, and 3 cases of typhus remained under treatment in hospital on Saturday.

Deaths from diseases of the respiratory system, which had risen from 43 for the week ended March 21 to 48 for the following week, fell this week to 30, or 18 below the average for the corresponding week of the last ten years. The 30 deaths consist of 18 from bronchitis, 10 from pneumonia or inflammation of the lungs, and 2 from croup.

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In the week ending Saturday, April 11, the mortality in twenty-eight large English towns, including London (in which the rate was 20·0), was equal to an average annual death-rate of 22·9 per 1,000 persons living. The average rate for eight principal towns of Scotland was 25·0 per 1,000. In Glasgow the rate was 30·4, and in Edinburgh it was 19·3.

The average annual death-rate in the sixteen principal town districts of Ireland was 27·0 per 1,000 of the population.

The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 1·6 per 1,000, the rates varying from 0·0 in nine of the districts to 9·3 in Waterford—the 11 deaths from all causes registered in that district comprising 2 from whooping-cough, 1 from enteric fever, and 1 from diarrhœa. Among the 113 deaths from

all causes registered in Belfast are 1 from scarlatina, 1 from typhus, 2 from whooping-cough, 2 from simple continued fever, 3 from enteric fever, and 1 from diarrhoea. The 37 deaths in Cork comprise 1 from simple continued fever and 1 from enteric fever.

In the Dublin Registration District the registered births amounted to 243—127 boys and 116 girls; and the registered deaths to 207—94 males and 113 females.

The deaths, which are 3 over the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 30·6 in every 1,000 of the estimated population. Omitting the deaths (numbering 5) of persons admitted into public institutions from localities outside the district, the rate was 29·8 per 1,000. During the first fourteen weeks of the current year the death-rate averaged 30·2, and was 2·4 under the mean rate in the corresponding period of the ten years 1881-1890.

Eighteen deaths from zymotic diseases were registered, being 6 in excess of the low number for the preceding week, but 5 under the average for the 14th week of the last ten years. They comprise 2 from whooping-cough, 1 from diphtheria, 5 from enteric fever, and 1 from erysipelas.

The number of cases of enteric fever admitted to hospital is 7, being 1 under the number for the preceding week and 6 under that for the week ended March 28. Thirteen enteric fever patients were discharged, and 47 remained under treatment on Saturday, being 6 under the number in hospital at the close of the preceding week.

The hospital admissions include, also, 2 cases of measles, 1 case of scarlatina (the only case of that disease admitted during the last five weeks), and 1 of typhus. Eight cases of measles, 2 of scarlatina, and 2 of typhus remained under treatment in hospital on Saturday.

Forty-seven deaths from diseases of the respiratory system were registered, being 17 over the number for the preceding week, but 3 under the average for the 14th week of the last ten years. They comprise 28 from bronchitis, 8 from pneumonia or inflammation of the lungs, and 3 from croup.

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In the week ending Saturday, April 18, the mortality in twenty-eight large English towns, including London (in which the rate was 20·5), was equal to an average annual death-rate of 22·5 per 1,000 persons living. The average rate for eight principal towns of Scotland was 22·6 per 1,000. In Glasgow the rate was 25·9; in Edinburgh it was 21·7.

The average annual death-rate represented by the deaths registered in the sixteen principal town districts of Ireland was 27·6 per 1,000 of the population.

The deaths from the principal zymotic diseases in the sixteen districts



were equal to an annual rate of 1·6 per 1,000, the rates varying from 0·0 in Newry, Drogheda, Wexford, Dundalk, Sligo, and Lisburn, to 6·9 in Waterford—the 18 deaths from all causes registered in the last-named district comprising 2 from whooping-cough and 1 from diarrhœa. Among the 141 deaths from all causes registered in Belfast are 1 from scarlatina, 1 from typhus, 1 from diphtheria, 2 from enteric fever, and 4 from diarrhœa. The 19 deaths in Limerick comprise 1 from typhus and 1 from simple continued fever.

In the Dublin Registration District the registered births amounted to 234—131 boys and 103 girls; and the deaths to 186—79 males and 107 females.

The deaths, which are 4 under the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 27·5 in every 1,000 of the estimated population. Omitting the deaths (numbering 6) of persons admitted into public institutions from localities outside the district, the rate was 26·6 per 1,000. During the first fifteen weeks of the current year the death-rate averaged 30·0, and was 2·3 under the mean rate in the corresponding period of the ten years 1881–1890.

Only 10 deaths from zymotic diseases were registered, being 11 below the average for the corresponding week of the last ten years and 8 under the number for the week ended April 11. They comprise 7 from whooping-cough. No deaths from any of the forms of continued fever—typhus, enteric, or simple continued—were recorded.

Only 5 cases of enteric fever were admitted to hospital, against 7, 8, and 13, respectively, for the three weeks preceding. Four enteric fever patients were discharged, and 48 remained under treatment on Saturday, being 1 over the number in hospital on Saturday, April 11.

Seven cases of measles were admitted to hospital compared with 2 admissions in the preceding week: 5 patients were discharged, and 10 remained under treatment on Saturday, being 2 over the number in hospital at the close of the preceding week.

The hospital admissions include, also, 3 cases of typhus and 1 case of scarlatina; 5 cases of the former and 3 of the latter disease remained under treatment in hospital on Saturday.

Deaths from diseases of the respiratory system, which had risen from 30 for the week ended April 4 to 47 for the following week, fell to 38 or 3 under the average for the corresponding week of the last ten years. The 38 deaths comprise 22 from bronchitis and 11 from pneumonia or inflammation of the lungs.

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In the week ending Saturday, April 25, the mortality in twenty-eight large English towns, including London (in which the rate was 21·0), was equal to an average annual death-rate of 24·3 per 1,000 persons

living. The average rate for eight principal towns of Scotland was 22·1 per 1,000. In Glasgow the rate was 27·3, but in Edinburgh it was only 17·9.

The average annual death-rate in the sixteen principal town districts of Ireland was 22·5 per 1,000 of the population.

The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 1·4 per 1,000, the rates varying from 0·0 in eight of the districts to 5·2 in Armagh—one of the 2 deaths from all causes registered in that district having been caused by whooping-cough. Among the 112 deaths from all causes registered in Belfast are 3 from whooping-cough, 4 from enteric fever, and 1 from diarrhœa. The 17 deaths registered in Limerick comprise 2 from typhus and 1 from simple continued fever. The 9 deaths in Londonderry comprise 2 from diarrhœa.

In the Dublin Registration District the registered births amounted to 200—113 boys and 87 girls; and the registered deaths to 156—76 males and 80 females.

The deaths, which are 46 under the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 23·0 in every 1,000 of the estimated population. Omitting the deaths (numbering 3) of persons admitted into public institutions from localities outside the district, the rate was 22·6 per 1,000. During the first sixteen weeks of the current year the death-rate averaged 29·6, and was 2·6 under the mean rate in the corresponding period of the ten years 1881—1890.

Only 8 deaths from zymotic diseases were registered, being 2 under the low number for the preceding week and 13 below the average for the 16th week of the last ten years. They comprise 4 from whooping-cough, 1 from enteric fever, and 1 from diarrhœa.

There has been a gradual decline in the weekly number of cases of enteric fever admitted to hospital from 13 for the week ended March 28 to 2, the number of admissions for this week. Fifteen enteric fever patients were discharged, 1 died, and 34 remained under treatment on Saturday, being 14 under the number in hospital at the close of the preceding week.

The hospital admissions include, also, 3 cases of measles, but no cases of scarlatina or of typhus were received. Five cases of measles, 2 of scarlatina, and 4 of typhus remained under treatment in hospital on Saturday.

The number of deaths from diseases of the respiratory system registered is 32, being 14 below the average for the corresponding week of the last ten years, and 6 under the number for the week ended April 18. The 32 deaths comprise 19 from bronchitis and 10 from pneumonia or inflammation of the lungs.

## METEOROLOGY.

*Abstract of Observations made in the City of Dublin, Lat. 53° 20' N.  
Long. 6° 15' W., for the Month of April, 1891.*

|                                                                          |   |   |   |                |
|--------------------------------------------------------------------------|---|---|---|----------------|
| Mean Height of Barometer,                                                | - | - | - | 29·964 inches. |
| Maximal Height of Barometer (on 20th, at 9 p.m.),                        |   |   |   | 30·342 „       |
| Minimal Height of Barometer (on 5th, at 9 a.m., and<br>29th, at 9 p.m.), | - | - | - | 29·383 „       |
| Mean Dry-bulb Temperature,                                               | - | - | - | 45·4°.         |
| Mean Wet-bulb Temperature,                                               | - | - | - | 42·6°.         |
| Mean Dew-point Temperature,                                              | - | - | - | 39·4°.         |
| Mean Elastic Force (Tension) of Aqueous Vapour,                          | - |   |   | ·243 inch.     |
| Mean Humidity,                                                           | - | - | - | 80·5 per cent. |
| Highest Temperature in Shade (on 30th)                                   | - | - | - | 65·7°.         |
| Lowest Temperature in Shade (on 10th),                                   | - | - | - | 33·1°.         |
| Lowest Temperature on Grass (Radiation) (on 1st),                        |   |   |   | 26·1°.         |
| Mean Amount of Cloud,                                                    | - | - | - | 58·5 per cent. |
| Rainfall (on 14 days),                                                   | - | - | - | 1·553 inch.    |
| Greatest Daily Rainfall (on 3rd),                                        | - | - | - | ·482 inch.     |
| General Directions of Wind,                                              | - | - | - | S.E., E.N.E.   |

*Remarks.*

April, 1891, was a cold, rather dry and March-like month. The mean temperature, rainfall, and rainy days were all below the average. On only one day, the 30th, did the thermometer rise above 60° in the shade.

In Dublin the arithmetical mean temperature (45·7°) was 2·0° below the average (47·7°); the mean dry bulb readings at 9 a.m. and 9 p.m. were 45·4°. In the twenty-five years ending with 1889, April was coldest in 1879 (the cold year) (M. T. = 44·5°), and warmest in 1865 and 1874 (M. T. = 50·4°). In 1886 the M. T. was 46·3°, in 1887 it was as low as 45·1°, in 1888 it was (as in 1891) only 45·7°, in 1889 it was 46·1°, and in 1890 it was 47·3°.

The mean height of the barometer was 29·964 inches, or 0·114 inch above the average value for April—namely, 29·850 inches. The mercury rose to 30·342 inches at 9 p.m. of the 20th, and fell to 29·383 inches at 9 a.m. of the 5th, and 9 p.m. of the 29th. The observed range of atmospherical pressure was, therefore, 0·959 inch—that is, a little less than an inch.

The mean temperature deduced from daily readings of the dry bulb thermometer at 9 a.m. and 9 p.m. was 45·4°, or 4·8° above the value for March, 1891. Using the formula, *Mean Temp.* = *Min.* + (*max.* — *Min.* × ·476), the value also becomes 45·4°, or 2·0° below the average mean temperature for April, calculated in the same way, in the twenty-five years, 1865–89, inclusive (47·4°). The arithmetical mean of the

maximal and minimal readings was  $45.7^{\circ}$ , compared with a twenty-five years' (1865–1889 inclusive) average of  $47.7^{\circ}$ . On the 30th, the thermometer in the screen rose to  $65.7^{\circ}$ —wind, S.S.W.; on the 10th the temperature fell to  $33.1^{\circ}$ —wind, calm. The minimum on the grass was  $26.1^{\circ}$ , on the 1st.

The rainfall was 1.553 inches, distributed over 14 days. The average rainfall for April in the twenty-five years, 1865–89, inclusive, was 2.055 inches, and the average number of rainy days was 15.2. The rainfall, therefore, was considerably below the average, while the rainy days were also deficient. In 1877 the rainfall in April was very large—4.707 inches on 21 days; in 1882 also 3.526 inches fell on 20 days. On the other hand, in 1873, only .498 of an inch was measured on 8 days; and in 1870 only .838 of an inch fell, also on 8 days. The fall in 1890 was 1.575 inches on 14 days.

No solar halos were seen. There were lunar halos on the 14th and 15th. The atmosphere was more or less foggy on the 4th, 5th, 9th, 10th, 11th, 26th, and 27th. High winds were noted on 9 days, but did not reach the force of a gale on any occasion. There was no snow or sleet, but hail fell on the 1st and 7th. The temperature exceeded  $50^{\circ}$  in the screen on 18 days, compared with 9 days in March, 14 days in February, and 5 days in January. It did not fall below  $32^{\circ}$  in the screen on any night. The minima on the grass were  $32^{\circ}$ , or less, on 12 nights, compared with 20 nights in March, 17 in February, and 21 nights in January. The mean lowest temperature on the grass was  $34.1^{\circ}$  (as in 1890 also), compared with  $34.4^{\circ}$  in 1889,  $34.6^{\circ}$  in 1888, and  $31.6^{\circ}$  in 1887.

During the period ending Saturday the 4th a large area of low barometer came in over Ireland from the Atlantic, causing strong south-easterly winds and heavy falls of cold rain and sleet almost until the end. The maximal rainfall was .482 inch on Friday the 3rd. Hail was observed on Wednesday the 1st.

Still continuing cold throughout, the weather of the week ended Saturday the 11th was at first dull and rainy, afterwards dry and hazy but at times bright. During the first two days an elongated V-shaped depression stretched across central Europe from Ireland to North Germany. To the N. of this "furrow" of low pressure strong, cold S.E. winds prevailed, and heavy rains fell at many English and German stations, thunder occurring on Sunday at Loughborough, Cambridge, and Paris. To the S. of the "hollow," variable S.W. winds of but moderate strength, warmer but rainy weather prevailed. During the period from Tuesday to Thursday, inclusive, a clearly-defined cyclonic system travelled in a curve from the S.W. of Ireland to Brittany, across Northern France and Belgium to the neighbourhood of Berlin, where the system disappeared. It caused cold, dry, and fine weather in Scotland and Ireland, in which countries



its N.E. winds prevailed; but in England the weather was dull, cold, and rainy. On Friday the 10th a fall of the barometer in the W. caused southerly winds and a rise of temperature in Ireland, but on Saturday the barometer rose again and the wind backed to E., becoming as dry and searching as ever. In Dublin the mean height of the barometer was 29·973 inches, pressure ranging from 29·383 inches at 9 a.m. of Sunday (wind, S.E.) to 30·195 inches at 9 p.m. of Thursday (wind, N.N.W.). The corrected mean temperature was 43·1°, the mean dry bulb temperature at 9 a.m. and 9 p.m. being 43·0°. The thermometers in the screen rose to 51·8° on Friday having been down to 33·1° during the previous night. Rain fell in measurable quantity on three days, the total amount being ·289 inch, of which ·185 inch was referred to Sunday. The prevailing wind was N.N.E. Hail fell on Tuesday the 7th.

The "Dawn of Spring" would be an appropriate description of the weather of the week ended Saturday the 18th, for—although temperature was still low by night and the wind was often from a cold point and searching—the days were more genial than of late, and the showers were of soft rain and gave an unwonted impetus to vegetation. In the period from Sunday to Tuesday an anticyclone was found over Scandinavia, while a depression passed south-eastwards from the S.W. of Ireland across France to the Gulf of Genoa. The latter system caused heavy rains in southern Ireland and many parts of France, and snow fell on the Dublin Mountains early on Monday morning. In the wake of this depression a new area of high pressure appeared on Tuesday off the S.W. of Ireland, and fine weather set in, with N.W. winds, interrupted by easterly sea breezes on the east coast during the daytime. Lunar halos were seen at many British and Irish stations on the evenings of Tuesday and Wednesday the 14th and 15th. Between this latter day and the close of the week a cyclonic system of no great intensity travelled south-eastwards down the North Sea, causing fresh N.W. to N. winds and cold showers of rain, sleet, and hail at many stations, especially on the east coast of Great Britain. In Ireland the weather was finer and milder. In Dublin the mean atmospherical pressure was 30·172 inches. The corrected mean temperature was 46·6°, the mean dry bulb temperature at 9 a.m. and 9 p.m. was 46·4°. The rainfall was ·238 inch on three days. The prevailing wind was N.N.W.

Cold, dry weather and parching easterly and north-easterly winds held all through the week ended Saturday, the 25th. Throughout the period an anticyclone, or area of high barometrical pressure, was found over Scotland; whereas pressure was relatively low over Spain, France, and the Bay of Biscay. Hence, fresh to strong easterly or north-easterly winds were prevalent in the British Islands, and on Wednesday and Thursday they reached the force of a moderate gale at many exposed seaboard stations. The rainfall during the week was on the whole trifling,

but a considerable fall of cold rain spread westwards from the N.E. of England to the E. and S.E. of Ireland in the interval between Tuesday morning and Thursday morning. On this latter day, also, considerable downpours of rain occurred over the greater part of France. On Friday the northern anticyclone moved southwards, and decreased in intensity. In Dublin the mean height of the barometer was 30·224 inches. The corrected mean temperature was 45·6°, or 1° below that of the previous week. The mean dry bulb temperature at 9 a.m. and 9 p.m. was 45·7°. Rain fell in measurable quantity on only one day—Tuesday—to the amount of ·060 inch. The wind was constantly E. to N.E. The mean temperature was 0·4° below that of the last week of January, 1·9° below that of the last week of February, and 0·9° below that of the first week of March.

In the closing period of the month—26th to the 30th, inclusive—at first of an easterly type, cold and hazy, the weather afterwards became warmer and softer, with fresh S.W. winds and frequent showers. In general, therefore, conditions were favourable and much more genial than for many weeks back. At the beginning of the period an anticyclone stretched from the east of Ireland across England and the North Sea to Holland and Belgium; it was accompanied by fine, cold, hazy, weather. On Monday depressions arrived off the N.W. of Scotland and also the W. of France, and by Wednesday gradients for S.W. winds were fully established over Western Europe. A considerable, but short-lived, rise of temperature followed, the thermometer in the shade rising on Thursday, the 30th, to 67° at Cambridge, 66° in Dublin, 65° at Loughborough, 64° in London, and 63° at Parsonstown and Yarmouth. The thermometer in the screen fell to 36·1° on Sunday, and rose to 65·7° on Thursday. The rainfall was ·071 inch on three days. The prevailing winds were S.W. and N.W.

The rainfall in Dublin during the four months ending April 30th has amounted to only 3·203 inches on 46 days, compared with 9·045 inches on 59 days during the same period in 1890, 8·345 inches on 74 days in 1889, 8·090 inches on 58 days in 1888, and a 25 years' average of 8·466 inches on 66·2 days.

At Knockdolian, Greystones, Co. Wicklow, the rainfall during April, 1891, amounted to 2·920 inches, distributed over 13 days; ·950 inch falling on the 1st, and ·720 inch on the 3rd. The total fall since January 1st, 1891, equals 5·725 inches on 43 days.

At Cloncevvin, Killiney, Co. Dublin, the rainfall in April was 1·190 inches on 12 days. The total fall since January 1 has been only 2·430 inches on 38 days—the averages of the six previous years for the same four months being 7·746 inches, on 58 days.

## PERISCOPE.

### PATHOLOGY OF DELIRIUM TREMENS.

THE *Australian Medical Gazette* is responsible for the following extract from a temperance sermon, said to have been delivered by the Rev. Dr. Talmage in New York:—"Dr. Sax, of France, has recently discovered something which all drinkers ought to know. He has found out that alcohol, in every shape, whether of wine, or brandy, or beer, contains parasitic life called *bacillus potumanix*. By a powerful microscope these living things are discovered, and when you take strong drink you take them into the stomach and then into your blood; and getting into the crimson canals of life, they go into every tissue of your body and your entire organism is taken possession of by those noxious infinitesimals. When in delirium tremens a man sees every form of reptilian life it is only these parasites of the brain in exaggerated size. It is not a hallucination that the victim is suffering from. He only sees in the room what is actually crawling and rioting in his own brain. Every time you take strong drink you swallow these maggots, and every time the imbibor of alcohol in any shape feels vertigo, or rheumatism, or nausea it is only the jubilee of these maggots."

### EXCISION OF THE BLADDER.

M. PAWLIK, Prague, reports a case of the total excision of the bladder from a woman. The patient first came under his notice for persistent hæmaturia; he found a polypus, which he excised with a thermo-cautery. The following year, 1889, the patient returned stating that the hæmaturia had recommenced. He now determined on its radical cure, and on the 27th of August he removed the whole of the bladder, suturing the ureters to the urethra. The patient made a good recovery, though when she walks the urine escapes involuntarily.—*Le Mercredi Médical*, No. 44.

### CHEWING GUM.

THE *Boston Medical and Surgical Journal* is responsible for the following extract from "the monthly Bulletin of a certain State Board of Health:—"Chewing Gum a Healthful Exercise.—We have seen the most excitable young lady, with a highly strung nervous organisation, under its magic influence become as quiet and contented as the well-fed cow that lies in the barnyard chewing its cud. We know of nothing that will, with anything like such undiminisibility (*sic*) endure so much mastication. We have chewed a piece of this gum contentedly for two hours without any perceptible change in its bulk, and after remaining under the seat of the

chair, on the under side of the table, or on the bedpost over night, if not found and confiscated, it was ready for as grand service as when first pressed between the molars. We believe that every ship sailing upon the high seas should be well supplied with chewing-gum; and in time of danger of shipwreck the passengers should be furnished with at least a half-dozen pieces, so that if cast upon some barren and uninhabitable coast or island, they might have something with which to beguile the weary hours; and we know of nothing so innocently beguiling."

#### THE METRIC SYSTEM.

IN Russia all medical and pharmaceutical students are now obliged to make themselves acquainted with the metric system, which is to be legalised and made compulsory in prescribing and dispensing after five years. The British Islands and the United States are almost the only civilised countries that cling to the clumsiness of the old weights and measures. In America some advance is being made. The metric system alone has been legalised by Congress, and it is in use in the U. S. Navy, Marine, Hospital Service, Coast Survey, and Post Office. At the Toronto Meetings of the American Medical Association (Sept., 1889) a committee was appointed "to promote the use of the metric system of weights and measures among professional men, and especially among physicians and pharmacists." The convention for the seventh decennial revision of the U. S. Pharmacopœia, which met at Washington on May 6, 1890, decided to adopt the metric system in the next edition. We are indebted to the N. Y. *Medical Record* for these facts, and also for the following rough practical estimate:—An ordinary teaspoon contains 5 c.c., a dessertspoon 15 c.c., a tablespoon 20 c.c.

#### EXALGIN.

IN a communication to the Académie de Médecine M. Desnos states that he found exalgin most useful in neuralgia of the face, in neuralgia of the ophthalmic division of the fifth nerve, in intercostal and ilio-lumbar neuralgia, and in sciatica. In one remarkable case of sciatica, which resisted all other remedies, he effected a cure by giving 1 gramme 75 centigr. of exalgin. [Exalgin is an active and powerful drug, and we do not recommend any dose to exceed 7 grains.]

#### ELECTRICAL EXECUTION.

THERE has been difference of opinion as to the result of the experiment tried in the New York State Prison, at Auburn, on the 6th of August, 1890. A recent number of the *Occidental Medical Times* impartially reviews the whole case, and decides that though the electrical arrangements and manipulations were unquestionably mismanaged, the execution was not a failure—death was painlessly inflicted. After quoting from the *Medical*



Record of August 9th, 1890, a full report of the execution and the autopsy, the article states that the two questions to be determined are—Was death instantaneous on the first impact of the current, although respiratory movements continued after its first intermission? Did a condition of complete unconsciousness and insensibility to pain supervene upon the first shock? The first question is not and cannot be answered; scientific opinion unanimously answers the second affirmatively. In spite, then, of the inexplicable and inexcusable bungling of the operators, we may conclude that death was painless and instantaneous, and that the Auburn electrical execution was, *quâ* execution, a success.



MUCH good was expected from the benzoate of guaiacol in phthisis, but Sahli has found that given in quantities varying from 6 to 10 grammes. in twenty-four hours it produces no effect. The inertness of the salt is said to be due to its stability.—*Les Nouveaux Remèdes*.

#### FORTY CASES OF RIB-FRACTURE FROM MUSCULAR ACTION.

DR. JOSEPH P. TUNIS, at a meeting of the Philadelphia County Medical Society, read a paper giving a brief account of forty cases of rib-fracture by muscular action. The cases are collected from surgical literature, ancient and modern. The cases are thus summarised:—

| Rib affected |         | Side affected |      |
|--------------|---------|---------------|------|
| Second       | rib - 2 | Right side    | - 10 |
| Fourth       | „ - 1   | Left „        | - 19 |
| Fifth        | „ - 2   | Unrecorded    | - 11 |
|              |         |               | —    |
|              |         |               | 40   |
| Sixth        | „ - 5   |               |      |
| Seventh      | „ - 3   |               |      |
|              |         | Sex           |      |
| Eighth       | „ - 7   | Males         | - 22 |
| Ninth        | „ - 7   | Females       | - 17 |
| Tenth        | „ - 6   | Unrecorded    | - 1  |
| Eleventh     | „ - 7   |               |      |
| Unrecorded   | - 9     |               |      |

—*The Times and Register*, October 25th.

#### HYDROSTATIC TREATMENT OF INVERSION OF THE WOMB.

M. NEUGEBAUER reports the successful treatment of inversion of the womb of a woman twenty-two years old by inserting a caoutchouc bag against the fundus uteri, which occupied the upper two-thirds of the vagina, and gradually filling the bag with water. The treatment commenced on the 10th of June by inflating the bag with ten ounces of

water, and gradually, by daily increments, increasing the quantity until it reached fifteen ounces, which it did on the 17th of June, when the uterus returned to its normal condition, and has remained so.—*Le Mercredi Médical*, 5th November.

#### ARISTOL FOR LUPUS.

At a meeting of the Société de Thérapeutique, on the 1st of September, 1890, M. Boymond recommended the following ointment for lupus:—Aristol, 3 to 10 grammes; vaselin, 90 grammes.—Mix. To be applied two or three times daily to the sore, the part having been previously washed with soap.—*L'Union Médicale*, No. 130.

#### ENDURANCE.

PROFESSOR N. SHALER (*Schribner's Magazine*, November) writes:—On May the 7th, 1864, General Joseph Johnson, C.S.A., commenced his Atlanta campaign. The first Kentucky brigade numbered 1,140. Until the 1st of September the brigade was almost continuously in action. In this period they received 1,860 hospital wounds—the dead counted as wounds—and but one wound for each visitation to the hospital. Only 50 men were unwounded. There were 240 men left for duty, and only 10 deserted.

### DR. HALLIBURTON'S "CHEMICAL PHYSIOLOGY."

TO THE EDITOR OF THE DUBLIN JOURNAL OF MEDICAL SCIENCE.

SIR,—While thanking you for the appreciative review of my book on Chemical Physiology in the May number of your Journal, I should like to be allowed to remark that the only error which your reviewer has pointed out in the book is not one in reality. Your reviewer says that the statement that "the most abundant urate obtained from human urine is the *normal* sodium urate" is incorrect. Perhaps it would have been better if I had used the words *contained in*, instead of *obtained from*. With this alteration, the statement is perfectly correct. The careful reader of my book will immediately see that I am, at the page where the statement in question occurs, speaking of normal urine. On the following page the acid sodium urate is spoken of as the chief constituent in deposits of urates, and on the page after this a *résumé* of Sir William Roberts' views on the quadrurates is given. If Sir W. Roberts' theory is ultimately accepted, the sentence of which your reviewer falls foul will of course require modification.

I remain, truly yours,

W. D. HALLIBURTON.

King's College, London, 7th May, 1891.

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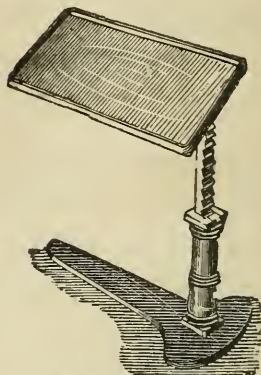
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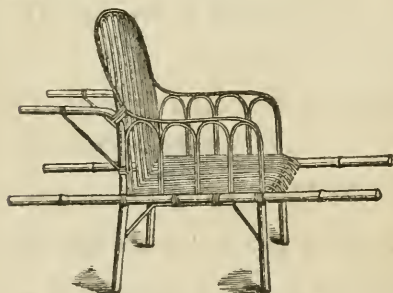
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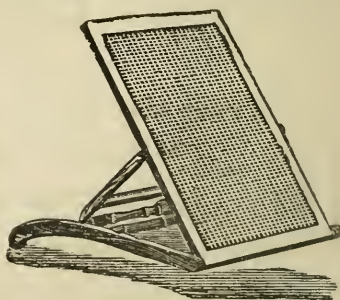
This can also be used, as shown above, as a  
Reading or Writing Desk.

|                           |   |        |
|---------------------------|---|--------|
| Birch polished any colour | - | £2 5 0 |
| Walnut, Mahogany, or Oak  | - | 3 3 0  |

**CARRYING CHAIR.**

This light Carrying Chair is made entirely of  
Cane and Malacca, with Bamboo Handles,  
and is very comfortable.

Prices - - 21/-, 25/-, 35/-, and 42/-

**BED REST,**

From 12/6- to 21/-

Spinal Board, £1, £1 10s.; and £1 15s.

Spinal Carriages from 8 to 20 Guineas.

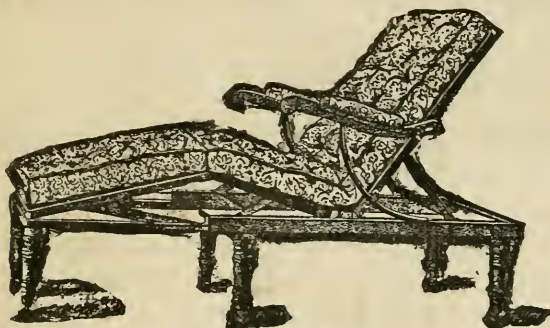
} Full particulars on  
application

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**FANNIN & COMPANY,**  
Surgical Instrument Makers,  
**41 GRAFTON STREET, DUBLIN.**

# Leveson & Son's Invalid Furniture.

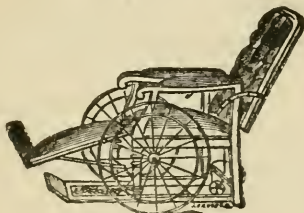
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**ILKLEY COUCH.**

This Couch can be adjusted to any required position. Price from 2 to 10 Guineas.

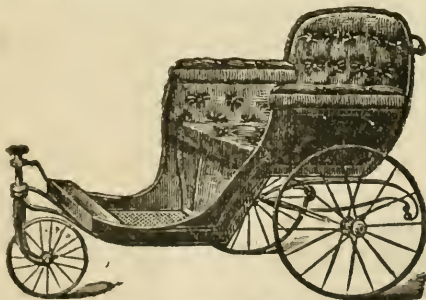
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**MERLIN CHAIR.**

Made of solid wood, Oak or Mahogany, from 4½ to 17 Guineas.

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**INVALID'S CARRIAGE,** from £8 8s.

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WICKER BATH-CHAIRS, from 3 to 6 GUINEAS.  
LEG RESTS, INVALID WATER BEDS and CUSHIONS, AIR CUSHIONS, CRUTCHES,  
and every description of Surgical and Medical Appliances for Invalids.

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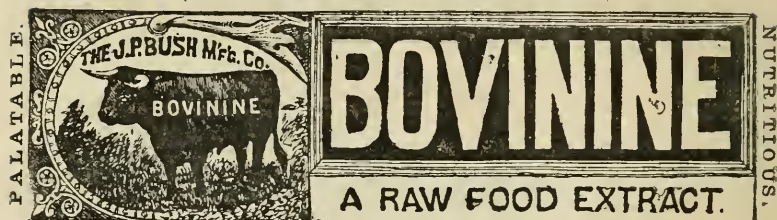
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A Complete Catalogue sent free on application

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(Introduced to the Medical Profession in 1878.)



THE VITAL PRINCIPLES OF BEEF CONCENTRATED.  
CONTAINING 20 PER CENT. OF COAGULABLE ALBUMEN.

## What the **MEDICAL PROFESSION** say of **BOVININE**.

"For exhausted *professional or business men* **BOVININE** will, better than any nutriment I know of, build up and restore the overtaxed mind and body."

"I am more than satisfied with the preparation; it is one on which the Profession may rely without fear of disappointment."

"It is so concentrated that *half a teaspoonful* seems to communicate more support *than a dessertspoonful of many kindred preparations.*"

"Its place cannot be supplied by any other preparation."

"Deserves the highest endorsement the Medical Profession can give it."

"I am prescribing **BOVININE** daily, and have yet to find a pathological condition that it will not benefit."

"I am each day more impressed with its great value."

"I have found the stomach to retain **BOVININE** when *all other substances of a liquid nature* were rejected."

"In a practice of *forty-seven years* I have found nothing to equal it in its power to restore a patient after *wasting diseases.*"

"It has yielded unparalleled results in cases of *typhoid, pneumonia, acute phthisis, and gastric catarrh.*"

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"For *dyspeptics* there is nothing equal to it."

"In *typhoid fever* **BOVININE** is especially useful."

"The results I obtained in two cases of *extreme debility and wasting in infants* were really astonishing."

"In *Bright's disease*, with large albuminous waste, it is the best food I have found."

"It is one of the few articles which, I believe, will never go out of fashion."

SAMPLES free to the Medical Profession on application to the Company.

Prepared only by THE J. P. BUSH MANUFACTURING CO., Chicago & New York, U.S.A.

Depot for the United Kingdom—32 SNOW HILL, London, E.C.

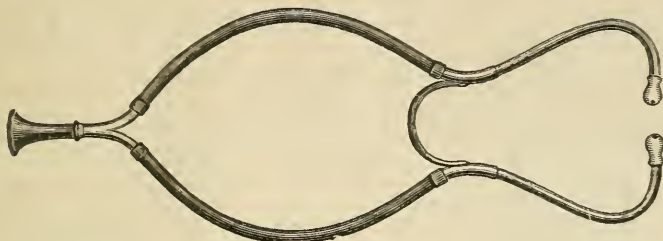
Sold by all Chemists. In Bottles, 12 oz., 4s. 6d.; 6 oz., 2s. 9d.



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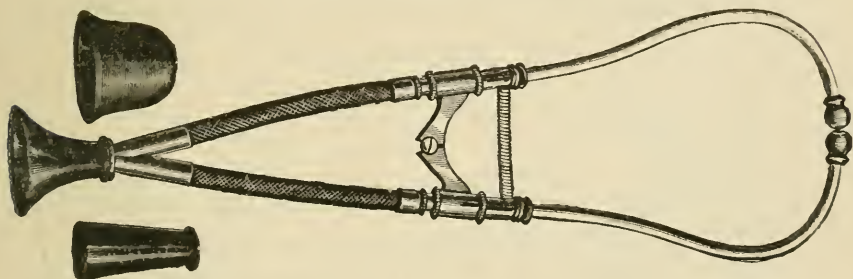
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Price 5s. 6d. each.

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CAMMAM STETHOSCOPE.  
With Steel Spiral Wire Tension Spring.  
Price 12s. 6d.

Do., Folding, very portable, 15s.

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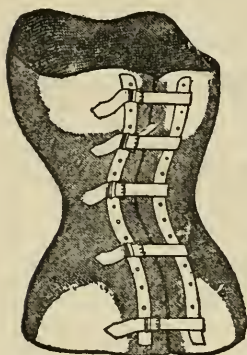
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Price 10s.

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**FANNIN & COMPANY,**  
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TELEGRAPHIC ADDRESS—"FANNIN, DUBLIN."

# Cocking's Adaptable Poroplastic Jackets and Splints.



## Instructions for Measurement, &c.

### **JACKET** (*in cases of slight deformity*).

Circumference at axilla.

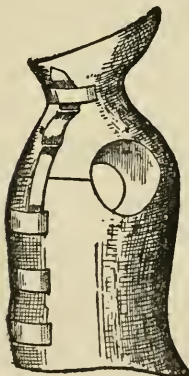
" waist.

" hips.

Length from axilla to great trochanter.

In severe angular cases circumference over apex of curve, position of same, and contour should be given ; in lateral cases a description of the case.

In all cases it should be stated if for male or female.



### **CERVICAL JACKET.**

Same measurements required, and circumference at neck, and length from neck to axilla.

Any part of the Jacket can in the process of Manufacture be left Soft.



### **CLUB FOOT.**

Circumference below knee.

" ankle.

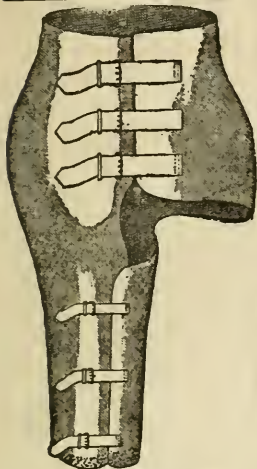
" heel and instep.

Length from below knee to ground.

" of foot.

SOLE AGENTS FOR DUBLIN—**FANNIN & CO.**  
Manufacturers of Surgical Instruments & Appliances, Medical Booksellers & Publishers,  
41 GRAFTON-STREET, DUBLIN.

# Cocking's Adaptable Poroplastic Jackets and Splints.



Instructions for Measurement, &c.

## HIP SPLINT.

Circumference at waist.

" hips.

" thigh, top of

" above knee.

Length from waist to groin.

State if for right or left side.



## LEG SPLINT.

Circumference at top of thigh.

" above knee.

" at knee.

" below knee.

" calf.

" ankle.

Length from groin to centre of knee.

" centre of knee to ankle.

State if for right or left leg.

When the foot-part is required, also circumference of heel and instep, and length from centre of knee to ground.

If the limb is contracted the contour should be given.

Splints are also made in Poroplastic for fracture of Inferior Maxilla, Humerus, Elbow-Joint, Forearm, Thigh, Knee-Joint, Leg, Shoulder-Joint, Hand, &c.

These Splints can be fitted perfectly to the Patient if softened either by hot water or in a Heater made for the purpose. When mounted with washing, hot water will do; if with leather, a Heater should be used. The material becomes quite hard again in two or three minutes.

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# BISHOP'S

## Granular Effervescent Preparations.

Estab. 1857.

Silver

Medal

Highest

Award,

Paris,

1889.

We beg to call the attention of the Medical Profession to the fact that we were the original inventors and makers of Granular Effervescent Preparations, and that for more than thirty years we have given our sole attention to perfecting this one class of articles. In these preparations, which are universally admitted to be the finest in the market, the most scrupulous care and attention are given by us to ensure uniformity, and we guarantee that they may be absolutely relied on. As the profession naturally wish to obtain the best preparations for their patients, they will make certain of doing so, if, when prescribing, they specially mention *Bishop's*, as by that means they will not only secure the best article in the market, but be certain that the materials used are of the finest quality and always kept up to the highest standard.

Gold

Medal,

Ostend,

1888.

Lists free on application.

|                            |                               |                                  |                        |
|----------------------------|-------------------------------|----------------------------------|------------------------|
| Antipyrin,                 | 5 and 10 grs. in 1 dr.        | Lithia Benzoate,                 | 5 grs. in 1 dr.        |
| Antifebrin,                | 5 and 10 grs. in 1 dr.        | Lithia Salicylate,               | 5 grs. in 1 dr.        |
| Caffeine Citrate,          | 1 & 3 grs. in 1 dr.           | Nux Vomica,                      | 1-12 gr. in 1 dr.      |
| Caffeine Citrate,          | 5 & 10 grs. in 1 dr.          | Phenacetin,                      | 5 and 10 grs. in 1 dr. |
| 'Hydrobromate,'            | 1, 3, & 5 gr. in 1 dr.        | Potash Citrate,                  | 10 grs. in 1 dr.       |
| Euonymin,                  | 1 gr. in 1 dr.                | Soda Bicarbonate,                | 10 grs. in 1 dr.       |
| Exalgine,                  | 1, 2, and 5 grs. in 1 dr.     | Soda Salicylate,                 | 5 & 10 grs. in 1 dr.   |
| Iron Carb. (form. Blaud's) | 2 grs. in 1 dr.               | Soda Sulphate,                   | 10 grs. in 1 dr.       |
| Iron and Arsenic,          | 4 grs. and 3 mns.<br>in 1 dr. | Sodium Bromide,                  | 10 grs. in 1 dr.       |
| Lithia Citrate,            | 5 grs. in 1 dr.               | MAGNESIA CITRATE (the original). |                        |

And all other Granular Effervescent Preparations. (Lists free.)

CARLSBAD, VICHY, PULLNA, SELTZER, FRIEDRICHSHALL  
SALTS, &c., in Granular Effervescent form.

*None genuine without this Trade Mark.*



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## Natural Mineral Waters

Are used in the treatment of all cases in which the cure is recommended—viz., in *Chronic Gastric Catarrh, Hyperæmia of the Liver, Gall Stones, Chronic Constipation, Diabetes, Renal Calculi, Gout*, and diseases of the Spleen arising from residence in the tropics or malarious districts.

### THE NATURAL CARLSBAD Sprudel-Salt

contains all the essential ingredients of the CARLSBAD "SPRUDEL" MINERAL WATER. It is alkaline, and readily soluble in water. In small and frequent doses it is an efficient *diuretic*, but as an *aperient* it should be taken *before Breakfast* in doses of from 1 to 2 teaspoonfuls, dissolved in water, preferably warm.

Sole Importers—

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# VICHY

SPRINGS

### "CELESTINS."

For Diseases of the Kidneys, Gravel, Gout, Rheumatism, Diabetes, &c.

### "GRANDE-GRILLE."

For Diseases of the Liver, and Biliary Organs, &c.

### "HÔPITAL."

For Stomach Complaints.

### "HAUTERIVE."

An Excellent TABLE WATER.

**NOTICE.**—THE VICHY LIQUEUR, specially prepared, contains THE NATURAL SALTS OF VICHY, and may be taken before or after meals as a DIGESTIVE LIQUEUR, or it can be advantageously mixed with the Vichy Waters.

SOLE IMPORTERS—

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# INDIAN MEDICAL SERVICE.

INDIA OFFICE,  
1st May, 1891.

AN EXAMINATION

FOR

SIX APPOINTMENTS

AS

Surgeon in Her Majesty's Indian Medical Service

WILL BE HELD

In LONDON on the 24th AUGUST, 1891,  
AND FOLLOWING DAYS.

Copies of the Regulations for the Examination, with information regarding the Pay and Retiring Allowances, &c., of Indian Medical Officers, may be obtained from the Military Secretary, India Office, London, S.W., to whom the necessary certificates must be sent so as to reach him not later than Monday, 10th August, 1891.

O. R. NEWMARCH, MAJOR-GENERAL,  
*Military Secretary.*

MEDICAL DIVISION,  
WAR OFFICE,

27th April, 1891.

AN EXAMINATION OF CANDIDATES

FOR

FIFTEEN COMMISSIONS

IN

*The Medical Staff of Her Majesty's Army,*

WILL BE HELD IN

THE UNIVERSITY OF LONDON, BURLINGTON GARDENS, S.W.

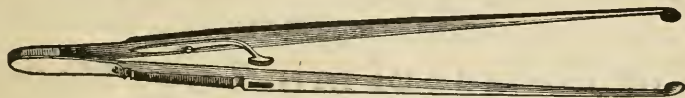
(By permission of the Senate).

*On the 24th of AUGUST next, and following days.*

Application for Admission to the Examination should be made in writing, without delay, to the Director-General, Medical Department, War Office, London.

(Signed), W. A. MACKINNON, *Director-General.*

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**DR. P. C. SMYLY'S FORCEPS,**  
For the Removal of Enlarged Follicles from the Pharynx.

**Price 10s.**

The treatment of follicular pharyngitis consists mainly in destroying the enlarged glandules by caustic pastes or the galvano-cautery. An objection to the former method is the difficulty of limiting the caustic action to the diseased part. The galvano-cautery is unwieldy and expensive, and not always at hand; moreover, its use is not unattended with some danger, as the wire has been known to fuse, and loss of voice result. A cicatrix sometimes remains after the application of the cautery, which is very irritating to the patient. The spoon-shaped forceps are free from these drawbacks and will be found especially suitable for the earlier cases. A 20 per cent. solution of cocaine having been applied, the forceps are introduced, the follicle seized vertically and twisted off. The operation is simple, effectual, and painless.

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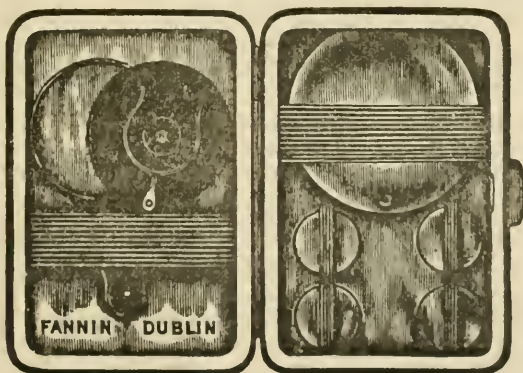
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**STUDENT'S OPHTHALMOSCOPE.**

Designed by Dr. A. H. BENSON, Ophthalmic Surgeon to St. Mark's Hospital.  
Price 10s. 6d. in neat Leather Case, with Spring Lock.

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Supply all descriptions of Surgical Instruments and Appliances,  
**41 GRAFTON-ST., DUBLIN.**

# COCA WINE.

(ARMBRECHT).

For Fatigue of Mind and Body.

A WONDERFUL RESTORATIVE OF VOCAL, MENTAL, & PHYSICAL POWERS.

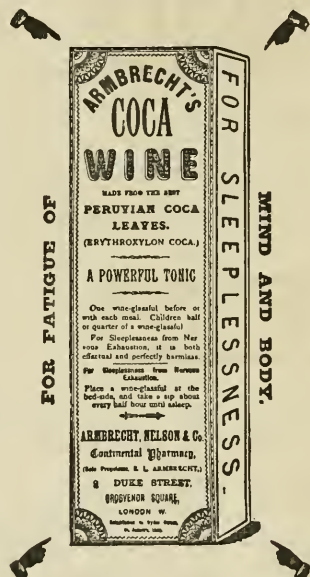
## RECIPE—

Fresh Huanuco Coca Leaves.

Pure Madeira Wine, q.s.

Each Wineglassful contains the Extractive Properties of  
One Drachm of

FRESH GREEN COCA LEAVES.



*P.S.—This is the only Wine which contains the  
Extractive Properties of the GREEN and FRESH  
LEAVES, and is therefore much more efficacious  
than those wines made from the dry imported leaves.*

Assuages Thirst and Hunger, and promotes Digestion. For Sleeplessness it is superior to Opiates, Bromides, and Chloral, as there is positively no reaction.

**RETAIL.—Price 4s. 6d. per bottle ; by post, 5s.**

**Six at 27s. ; and Twelve at 48s.**

**ARMBRECHT, NELSON, & CO.,**  
*2 Duke-street, Grosvenor-square, London, W.*

A Sample Bottle free to Medical Men and Clergymen on receipt of professional card.  
**Professional Price, 40s., Carriage Paid.**

PROCURABLE AT THE  
**APOTHECARIES' HALL, 40 MARY-ST., DUBLIN.**



# COLEMAN'S WINCARNIS

OR

LIEBIG'S EXTRACT OF MEAT AND MALT WINE.

## WINCARNIS

*Is a New Name Registered  
to prevent fraudulent  
imitations.*

Extract from Important Unsolicited Testimonial from **G. HOTHER, Esq., M.R.C.S., L.S.A.I.**  
**OVER TWO THOUSAND** have been received from Medical Men.

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To Messrs. Coleman & Co., Limited.—I have been attending a child, two and a-half years old suffering from Blood Poisoning; the child was very ill, and refused all kinds of nourishment. I then tried your Liebig's Extract of Meat and Malt Wine. I ordered him one tablespoonful every two hours, which he took readily; he had nothing else except medicine for fourteen days. The child is now recovering and takes ordinary food.

Yours truly, **GEO. HOTHER, Surgeon.**

## WINCARNIS

Is sold by all Druggists, Wine Merchants, and Patent Medicine Vendors in the United Kingdom, in Bottles 2s. 9d. and 4s. 6d. each. Ask for COLEMAN'S "WINCARNIS," or LIEBIG'S EXTRACT OF MEAT AND MALT WINE, and see that the word "WINCARNIS" is on the shoulder of bottle.

If there is any difficulty in getting the Wine, write direct to the manufacturers, who will forward

**Sample Pint Bottle free by Post on receipt of 33 Stamps.**  
" Dozen " " " Rail " 30s.

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Sole Proprietors of "OSMAZON," the New Beef Tea, and also Coleman's Crown Imperial Invalid Stout, which is strongly recommended by the Medical Faculty.

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FOR THE ADMINISTRATION OF



### Professor Koch's Remedy for Tuberculosis,

As approved of by Professor KOCH. Price 5s. 6d. each.

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# Bullock's Pepsina Porci. DOSE— 2 to 4 grains

Since the introduction by Dr. LIONEL BEALE of PEPSINA PORCI, Mr. BULLOCK has devoted special attention to its manufacture.

# Bullock's Acid Glycerine of Pepsine. DOSE— 1 to 2 drms.

*Possesses at least three times the digestive power of (and in most cases considerably more than) any other preparation of Pepsine and Glycerine, or fluid form of Pepsine whatever.*

May be prescribed with most substances compatible with Acids.

In 4 oz., 8 oz., and 16 oz. Bottles, and in Bulk.

The published experiments of G. F. DOWDESWELL, Esq., M.A., Cantab., F.C.S., F.L.S., &c., Dr. PAVY, Professor TUSON, the late Professor GARROD, and others, conclusively demonstrate the marked superiority of BULLOCK'S PEPSINA PORCI AND ACID GLYCERINE OF PEPSINE over every other Pepsine, or preparation of Pepsine—ENGLISH, FRENCH, GERMAN, OR AMERICAN.

\* \* *In prescribing either of the above preparations, it is suggested to insert in parentheses, as follows (BULLOCK).*

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And all suitable Foods for Diabetic Patients, Sweetened with Saccharin or Plain.

**DELICATE** VAN ABBOTT'S  
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**G. VAN ABBOTT & SONS,**  
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**Samples Free to the Profession.**

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**SURGICAL ESSAY PRIZE FOR 1891.**

**THE ROYAL COLLEGE of SURGEONS of EDINBURGH** offers for Competition among its Fellows and Licentiates the sum of THIRTY-FIVE GUINEAS for the best SURGICAL ESSAY on the subject of "The relative advantages and disadvantages of Inguinal and Lumbar Colotomy."

Particulars on application to—

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"It lathers freely, and by its emollient properties acts as a healing protective."—*The Chemist and Druggist.*



"One of the most pleasant preparations of the kind which it has ever fallen to our lot to use."—

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*"Securus Judicat Orbis Terrarum."*

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"THE QUEEN OF TABLE WATERS."

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**"Delightful and refreshing,"**

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**"More wholesome than any  
Aerated Water which art can  
supply."**

**"Of irreproachable character."**

**"Invalids are recommended  
to drink it."**

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